Ontario, Legislative Assembly

Sessional papers

SESSIONAL PAPERS.

VOL. XIX.—PART III.

FIRST SESSION OF THE SIXTH LEGISLATURE.

OF THE

PROVINCE OF ONTARIO.

SESSION 1887.

Toronto:
PRINTED BY WARWICK & SONS, 26 AND 28 FRONT STREET WEST.
1887.

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Asylums, Report	3	*Printed.*
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Blind Institute, Report	9	"
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No. 3.. Report upon the Lunatic and Idiot Asylums of the Province of Ontario for the year ending 30th September, 1886. (*Printed.*)

No. 4.. Report upon the Ontario Institution for the Education and Instruction of the Deaf and Dumb, Belleville, for the year ending 30th September, 1886. (*Printed.*)

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No. 11.. Report of the Fruit Growers' Association of Ontario for the year 1886. (*Printed.*)

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No. 27.. Return of the Municipal Council of the Township of Yarmouth, of money borrowed during the year 1886, under the Act respecting the investments in Tile Drainage. (*Not printed.*)

No. 28.. Copies of Advertisements, Tenders, Specifications, Contracts, etc., in connection with the erection of the proposed Legislative and Departmental Buildings of Ontario. (*Printed.*)

No. 29.. Return to an Address to His Honour the Lieutenant-Governor, praying that he will, in his capacity as visitor of the Western University of London, Ontario, call upon the Senate of said University to furnish a full and accurate account of the property of the University, and the income received therefrom, in order that the same may be laid before the Legislature, as directed by section 5, of 41 Vic., cap. 20. (*Not printed.*)

No. 30.. Return shewing the total number of Students in University College at the date of the Order; the number of female students at the same date, and also, the number of students attending lectures in each of the following subjects:—Greek, Latin, Mathematics, Pyhsics, History, Ethnology, English, French, German, Italian, Spanish, Hebrew, Chaldic, Syriac, Logic, Mental and Moral Science, Biology, Chemistry, Mineralogy and Geology. (*Not printed.*)

No. 31.. Return shewing on a map or plan each timber limit or berth now under license, and each timber limit or berth disposed of at the sale in October last, whether yet under license or not, with the names of the present licensees or owners thereof marked thereon, and the area thereof, and the bonus *per* square mile paid in respect thereof, and the dates when the same were respectively first placed under license. (*Not printed.*)

No. 32.. Return shewing the names of the persons, firms and companies, indebted to the Province on the first day of January, 1886, on account of Timber Dues, Ground Rent, or Bonuses for Timber Limits, the amount of indebtedness in each case, the balance, if any, due by such persons, firms and companies, on the first day of January in each year since 1880. The total amount of such indebtedness on the 1st day of January, 1886. (*Not printed.*)

No. 33.. Return shewing the persons by whom, and the limits or births in respect of which, the bonuses appearing as accruals from Woods and Forests, were payable in each year since 1871, the balances which remain unpaid on account of bonuses on the 31st December, in each year since 1871, with the names of the persons by whom the same were respectively owing, and the amount owed by each of them, and in respect of what limit or berth it was due, and the period during which it had remained unpaid after it became due, the amounts which in each of the said years were allowed to licensees in reduction of the sums owing by them, with the names of the persons to whom the allowances were made, the amount of each allowance and the reasons for making them. (*Not printed.*)

No. 34.. Return of copies of all Orders in Council relating to the sale of timber limits, which took place in October last. The names of the purchasers at the sale, the several limits bought by each purchaser, with the area of each of them, and the bonus *per* square mile agreed to be paid for each such limit. The deposit paid by each purchaser, the amount since paid on each purchase, and the nature of the security, if any, given for the residue of the price. The several limits which had been bid off at the sale which took place in October, 1872, and the price *per* square mile at which they were severally bid off at that sale. The names of all purchasers who have failed to comply with the conditions of sale. The names of all purchasers who have transferred their claims to other persons with the names of the transferees and dates of transfers to them respectively. The several limits, if any, put up for sale and not sold and the disposition since made of them and the authority under which such disposition was made. (*Printed.*)

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No. 42.. Return from the Queen's Printer as to the disposal of the Statutes of Ontario for the year 1886. (*Not printed.*)

No. 43. Return shewing what application has been made for payments out of the Consolidated Revenue, under the provisions of Sec. 4, cap. 4, 43 Vic., in respect of the dues on pine trees. Also, shewing what is the aggregate sum which, up to the first day of March last, the patentees of lands subject to the provisions of the Act, are entitled to receive out of the dues collected on pine trees cut after date of their Patents. (*Not printed.*)

No. 44.. Return giving copies of all correspondence with the Architect, Mr. Waite, concerning the plans prepared by him for the proposed new Parliament and Departmental Buildings, and any agreement made with him concerning his remuneration as such Architect. (*Printed.*)

No. 45.. Statement of the Returns forwarded to the office of the Provincial Secretary of all the Fees and Emoluments received by the Registrars of Ontario for the year 1886, made in accordance with the provisions of the R. S. O. Cap. 111, Sec. 97 and 43 Vic., Cap. 3, Sec. 2, with which are contrasted receipts of same nature in 1884 and 1885. (*Printed.*)

No. 46.. Statement in detail of receipts and expenditures on account of the Mercer Estate for the year 1885. (*Not printed.*)

No. 47.. Statement in detail of receipts and expenditures on account of the Mercer Estate for the year 1886. (*Not printed.*)

No. 48.. Copies of all correspondence, papers and reports, between the Department of Education and William S. Summerby and O. Dufort, Inspectors of Public Schools, in the United Counties of Prescott and Russell, during the last year, on the subject of Public Schools in the French Settlements of these Counties. Also, copies of all reports respecting the alleged difficulties between the English and French ratepayers of the town of L'Orignal, or, upon the propriety of establishing a Separate School for Protestant children in that town. (*Printed in part.*)

No. 49.. Return of copies of all correspondence subsequent to the year 1882, between the Department of Public Works and any person or persons with reference to the regulation of the waters of Lakes Simcoe and Couchiching, together

with the reports of the Engineer, shewing the amount expended in removing obstructions from the outlets of the lakes and also the condition in which the outlets are at the present time. (*Not printed.*)

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No. 51.. Correspondence with regard to a Conference of Provincial Ministers to consider questions affecting the autonomy of the Provinces and their financial arrangements with the Dominion. (*Printed.*)

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No. 53.. Detailed statement of the expenditure from the Poor School Fund for the years 1885 and 1886, with the sections and townships in which the expenditures were made; the rate on the dollar paid by the section in each year, with the length of time such schools were open, and the amount of aid, if any, received from County or Township municipality. (*Printed.*)

No. 54.. Return shewing the indebtedness of any Municipality to the Government, whenever the same may be in arrears for over one year, either on account of principal or interest. (*Printed.*)

No. 55.. Statement of Cash Transactions on account of Upper Canada College for the year ending 30th June, 1886. (*Printed.*)

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No. 59.. Report upon the Division Courts of Ontario. (*Printed.*)

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No. 64..	Return shewing the number of cases brought before E. B. Borron, Stipendiary Magistrate for Northern Nipissing, for adjudication during each year since his appointment; and shewing also, the other duties performed by him in each year. (*Printed.*)
No. 65..	Detailed Statement of all Bonds and Securities recorded in the Provincial Secretary's office, since the last return submitted to the Legislative Assembly, made in accordance with the provisions of the Statute. (*Not printed.*)
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No. 68..	Report of the Entomological Society for 1886. (*Printed.*)
No. 69..	Return shewing the agreement entered into between the Province and the Roman Catholic Episcopal Corporation of the Diocese of Kingston for the use of the building known as Regiopolis College. The amount expended for repairs and improvements, made at the expense of the Province, upon the building. (*Printed.*)
No. 70..	Report of the Inspector of Legal Offices. (*Printed.*)

FIFTEENTH ANNUAL REPORT

OF THE

INSPECTOR OF PRISONS AND PUBLIC CHARITIES

UPON THE

ONTARIO INSTITUTION

FOR THE

Education and Instruction of the Blind,

BRANTFORD,

BEING FOR THE YEAR ENDING 30th SEPTEMBER, 1886.

Printed by Order of the Legislative Assembly.

Toronto:
PRINTED BY WARWICK & SONS, 26 AND 28 FRONT STREET WEST.
1887

OFFICE OF THE
INSPECTOR OF PRISONS AND PUBLIC CHARITIES, ONTARIO,
PARLIAMENT BUILDINGS, TORONTO, December, 1886.

SIR,—I have the honour to transmit herewith, to be presented to His Honour, the Lieutenant-Governor, the Fifteenth Annual Report upon the Institution for the Education and Instruction of the Blind, Brantford, being for the official year ending on the 30th September, 1886.

I have the honour to be, Sir,
Your most obedient servant,

R. CHRISTIE,
Inspector.

The Honourable
ARTHUR STURGIS HARDY, Q.C., M.P.P.,
Secretary for the Province of Ontario,
Toronto.

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INSTITUTION FOR THE EDUCATION OF THE BLIND.

FIFTEENTH

ANNUAL REPORT

OF THE

Inspector of Prisons & Public Charities

FOR THE

PROVINCE OF ONTARIO.

PARLIAMENT BUILDINGS,
Toronto, October, 1886.

To the Honourable JOHN BEVERLEY ROBINSON, *Lieutenant-Governor of the Province of Ontario.*

MAY IT PLEASE YOUR HONOUR:—

I beg to submit herewith the Fifteenth Annual Report upon the Ontario Institution for the Education and Instruction of the Blind, Brantford, being for the official year ending 30th September, 1886.

I have the honour to be,

Your Honour's most obedient servant,

R. CHRISTIE,
INSPECTOR.

INSTITUTION FOR THE EDUCATION OF THE BLIND.

During the year which closed on the 30th September, there were no particularly striking events to comment upon, but very shortly after the year ended, a case of diphtheria appeared in the Institution, to be followed within a few days by three more cases. All those attacked by this much dreaded disease were boys. I regret to have to report that the pupil first attacked died on the 10th October, being the first death which had occurred in the Institution for nearly six years; happily the other pupils made good recoveries. So soon as I received the Principal's telegram, reporting that diphtheria had appeared amongst the pupils, I went to Brantford with Dr. Bryce, the Secretary of the Provincial Board of Health. Aided by the Principal we made a very careful examination of the building and its drainage system, and although we found that the ventilation of the sewers, good as it was, might be improved and systematized, still we could not trace any local cause for the outbreak of the disease. At the time of writing, the outbreak has been confined to the four cases above mentioned and I trust that there will be no further spread. A scheme for the complete ventilation of the drainage system is being prepared and will be put in force as soon as practicable, so as to ensure that there shall be no danger to health through imperfectly ventilated drains.

The Principal, in his supplementary report upon this matter, refers to the desirability of providing the Institution with an hospital ward for the female pupils. The isolated hospital ward on the male side was of the greatest value at the time of this outbreak, and I would be extremely glad if a similar ward could be provided for female pupils, for in the event of an epidemic amongst them, great difficulty would be experienced in isolating the sick from the healthy.

The expectation expressed in the report of last year that the average attendance of pupils would be about 130 was realized, the average being exactly 132. The Principal is of opinion that during the session now in progress, the average attendance will be 140.

Other matters of minor interest are dealt with in my inspection reports, and also in the annual reports of the Principal and Surgeon. The reports upon the Literary and Musical Departments are also annexed. Perusal of these will shew that good progress is being made by the pupils and that the efficiency of the teaching staff is being maintained; nor is the Industrial Department neglected, as the statements of the Principal and Trades Instructor will shew.

Inspections.

Copies of my minutes are appended:—

"My first inspection of the Institution for the Blind, Brantford, for the official year, was made on the 19th January.

"On that date there were 134 pupils in attendance (74 males and 60 females), a slight increase as compared with the average attendance during the previous year. The health of all the pupils was found to be excellent, there being no case of illness among them, and they were reported to be making steady and satisfactory progress in their literary and industrial work. A number

of the classes were preparing the material for work to be exhibited at the Indian and Colonial Exhibition. The work already completed will certainly reflect much credit upon the Institution and its system of instruction, the specimens of domestic and fancy-work being both tasteful and artistic. External and internal views of the building are also being prepared to form a part of the exhibit.

"The main object of my visit on this occasion was to determine as to the details of certain repairs and improvements required to be made during the present season, the principal of which is an alteration in the heating appliances, with a view to maintaining a more even temperature in the extreme east and west wings. The drainage also of the residences of the Principal and Bursar, which has heretofore been left in abeyance, now requires attention; and the painting and repointing of certain portions of the main building are necessary to insure the comfort of the pupils who occupy the more exposed portions, as well as to keep the structure in a proper state of repair.

"Careful estimates of the amount required to effect these improvements have been made and will be submitted for approval, so that an appropriation may be made to cover the outlay.

"Internally the building was found to be in good order and will require but little expenditure to maintain it in this state during the present year.

"The whole work of the Institution appeared to be progressing most favourably, and the officers and teachers were evidently devoting themselves to their various duties with commendable spirit and energy.

"On the 4th of June I made a second inspection of the Institution, and as the session was to close on the 9th, I had an opportunity of seeing all the pupils before they left for their vacation. There were 138 present on the day of my visit, 78 males and 60 females; all of them appeared to be in excellent health indeed, their health during the session has been remarkably good throughout, and no interruption on account of ailments has occurred which could hinder their progress in studies or acquirements in industrial operations.

"The annual examinations of the classes in literary work had been completed previous to the day of my visit, and while it would be premature to speak of the precise result of the work of the session, prior to the receipt of the Examiners' report, yet from the minute record, which is kept of the progress made by each scholar from day to day, and from which all demerit marks are deducted and the actual advance made correctly shewn, a reliable estimate can be formed of the average attainments and progress of each scholar and, judging from this evidence steady application and good results have been obtained.

"The discipline and order of the Institution have also been well maintained, and from a retrospect of the session as a whole, the evidences are that the pupils have been thoroughly grounded in their various subjects of study.

"An examination of the building shewed that due care has been exercised in keeping it in good order in all its apartments, and the improvements made during the past two or three years have materially added to its comforts and appearance internally. Previous to my visit arrangements had been made authorising the commencement of some of the improvements for which appropriations were voted. The work of connecting the Principal's and Bursar's houses with the water system was nearly finished, and had been properly done.

"In consequence of the destruction of a considerable portion of the two sections of the boundary fence by a severe storm which passed over the Institution grounds lately, the reconstruction of the portions destroyed will necessarily have to be made. At the suggestion of the Principal, however, a cheaper and much more

economical line of demarcation can be established by substituting for the high picket fence which has been blown down, posts and iron rods only. This construction has been approved of and the work of clearing away the old fence is being proceeded with preparatory to the placing of the new one on the ground.

"The alterations necessary before replacing some of the steam heating pipes with those of larger diameter for the purpose of more perfectly heating the eastern or girls' wing, has also been attended to and the work advanced as far as practicable before the vacation term commences, and the whole can now be completed in a satisfactory manner before the assembling of another session.

"The grounds appeared to advantage; the crops promise a good return and the general condition of the cultivated portions shewed care and proper attention."

"I made a third inspection of the Institution on the 9th, 10th and 11th October.

"My visit was made in company with Dr. Bryce, Secretary of the Board of Health, owing to the appearance of three cases of diphtheria among the pupils of the Institution.

"The re-assembling of the pupils on the first day of September had taken place under the usual conditions. The Principal had reported them to be in good health and the session opened auspiciously in this respect. Although quite a number of the pupils of the former session had not returned, the new pupils—together with those of the old ones who had returned—brought the population up to the usual number, the pupils in attendance on the first day of our visit numbering 136, namely, 80 males and 56 females.

"On arriving at the Institution, we found one of the pupils to be in a very precarious condition, the disease in his case being malignant in its symptoms and not responding favourably to treatment. This case, I regret to say, resulted fatally on the morning of the 10th. In the other two cases, the disease did not appear to be so violent and the medical men in attendance expressed themselves hopefully as to recovery.

"Under the circumstances, we of course felt it to be our first duty to determine, if possible, whether the disease was traceable to any local cause, and the first two days were spent in making a thorough examination of the Institution itself, as well as the premises generally and the drainage system. In this examination we were assisted by Dr. Corson, the physician in attendance at the Institution.

"No evidence could be found, however, of there being any local cause for the appearance of the disease. The main and branch drains were inspected with a view to ascertaining their condition and at the same time provide more thorough ventilation where it was deemed advisable to have it, and instructions were given to continue this work throughout the drainage system. The extension of the drain-pipes and water supply to the Principal's house was also authorised, together with the necessary internal alterations, to make the system complete and thus avoid any danger of contamination from the cesspools in future.

"The condition of the buildings and their surroundings was found to be excellent. Improvements in the way of painting, calsomining, etc., had been properly and thoroughly attended to. All closets and outbuildings were clean and well kept, and refuse of all descriptions had been removed.

"The opinion entertained by the Principal, therefore, as to the probability of the disease being imported was concurred in by us; and the prompt action taken in isolating the three pupils who were taken with the malady will, it is hoped, entirely check its further spread.

"Every possible measure which could be suggested for the arrest of the disease has been authorised in view of the greater susceptibility to contagion among pupils who, in many cases, do not enjoy robust physical health and have not the power of resistance.

"The improvements authorized, such as painting the outside of the building and refitting the steam-heating in the east wing, have been satisfactorily completed, and both internally and externally the Institution now presents a neat and tidy appearance.

"In consequence of this outbreak of diphtheria, the regular work and routine of the Institution have been and, to some extent, will continue to be, interfered with so long as it is necessary to preserve the isolation of those afflicted with the disease.

"This condition of things is much to be regretted in its effect upon the work of the session, as there were many evidences on the part of the pupils of their capacity to make good progress and accomplish their work successfully through the systematic and harmonious action of the teachers and officials of the Institution."

EXAMINERS' REPORTS.

Literary Department.

The classes in this department were examined by Mr. Wilkinson, M.A., Principal of the Brantford Central School, and by Dr. Kelly, Public School Inspector. A copy of the report made by them will be found below :—

According to instructions we examined the literary classes of the Institution for the Blind at Brantford, commencing the 25th May last. The examination extended over four days. The results, which are hereto affixed, were very satisfactory. The management, order, attention and general tone of the establishment, were all that could be desired. The class rooms and halls were clean and well ventilated, and the grounds through which we drove on the last day of the examination seemed very much improved since our last visit. Of the library free use is made by the pupils, many of whom read rather extensively. Since the last examination the following books have been added to the list: Prescott's History of Peru, 2 vols.; Dicken's Tale of Two Cities, 3 vols.; Holmes' Autocrat, 2 vols.; Irving's Mohammed, 2 vols.; Thomas à Kempis, 1 vol.; Tales of Adventure, 2 vols.; Tales of Discovery, 2 vols.; Lamb's Tales from Shakespeare, 2 vols.; Æsop's Fables; Shakespeare's Henry V., 3 vols.; Quinten Durward, 2 vols.; Scarlet Letter, 2 vols.; Romeo and Juliet, 2 vols.; Kingsley's Greek Heroes, 2 vols; Last Days of Pompeii, 3 vols., and Scott's Poems. Frequently, as among seeing children, pupils may be found in intervals of leisure in some great room or corner persuing some favourite book. The want of a good gymnasium is still felt and should be supplied as soon as possible. The classes of the respective teachers are grouped as follows, with results :—

Mr. Wickens' Classes.

I. *Arithmetic*—Class B. Sixteen in number; examined in simple and compound rules and fractions; answering generally prompt and correct; about half the class exhibiting a good knowledge of the subject.

II. *Reading*—Class of 16. Grade A. The members of this class read with excellent expression, enunciate clearly and emphasize correctly.

III. *Natural History and Physiology*—Class of 10. Members show a satisfactory knowledge of physiology and do fairly in zoology, answering questions readily on the structure and functions of the human organs and laws of hygiene. Three answered all questions asked.

IV. *English Grammar*—Class B. This class had mastered the elements of the subjects pretty thoroughly, they detect and correct ordinary grammatical errors well, and have evidently been taught grammar practically, as was evinced by their correct English, they analyze and parse well; the majority quite ready for promotion to a higher class in this subject.

V. *Geography*—Class A. Examination chiefly by means of dissected map. Their facility in finding a country that was named is remarkable. They have acquired an intimate knowledge of the position of all the principal cities and towns, their relative position etc., know the forms of government, productions, manufactories, exports and imports of the several countries of Europe. No questions missed by the whole class.

VI. *Writing*—Class A. All write legibly; a few will write a business letter in very fair form. Writing a letter to sewing machine factory for a machine stating kind wanted, price, etc. The result was very creditable, showing not only fair writing but the ability to state briefly and clearly what was required.

Miss Walsh's Classes.

I. *English Grammar*—Class A. Fourteen members limit. The history of language, analysis and parsing of prose and verse. The work done by this class was excellent. Complex and compound sentences were readily analyzed and the words correctly parsed. The attainments of the pupils very uniform and good, the majority obtaining nearly the maximum of the marks.

II. *Reading*—Class C. Seventeen pupils, who read with good expression and correct emphasis.

III. *Writing*—Class B. Fourteen pupils; writing free and legible; letters generally well formed.

IV. *Geography*—Limit; North America and West Indies, but particularly the Dominion of Canada. The work had been well done by the majority of the class. A couple were rather behind the average, but geography had evidently been a pleasant study to them and their knowledge of their term's work was good. The questions were, in the main, such as are given in a thorough oral drill of seeing pupils, and the answers were quite as prompt and correct as would be given by a good class in the same work in the public schools.

V. *Object*—Class B. This class pursues pretty much the same methods as those followed in Class A. The pupils are younger and of course need more elementary training. They have mastered many of the leading facts as to the uses, products and habits of the common animals, and can tell by touch the names of birds, etc., when the objects are presented.

Miss M. E. Walsh's Classes.

I. *Grammar*—Class C. Eleven pupils; attentive and do good work; know definitions and analyze and parse fairly.

II. *Geography*—Class B. Thirteen pupils; limit, Dominion of Canada, West Indies, South America and United States. Use dissected map and do the work of their limit in a very satisfactory manner.

III. *Object Lessons*—Class A. Great improvement has been made in teaching the blind qualities of the things about which they read, by furnishing specimens of the articles

and teaching them the properties of those things objectively. Great care had been taken with this class. The principal points with reference to all the well-known animals, grains and groceries, were mastered. Acquaintance with this subject adds very much to their knowledge of geography and kindred matters.

IV. *Reading*—Class B. Have been taught to read in a tone loud and clear, but free from harshness. Know what they read; spelling not quite so good.

V. *Writing*—Class C. Write the names of the days of the week, Arabic numbers, proper names, capitals, etc., very fairly.

Miss Gillen's Classes.

Arithmetic—Class D. Twenty-two in this class, mostly young. Know rotation and numeration, can add three figures, mentally substract, multiply and divide, and do small problems.

II. *Geography*—Class D. Similar to the last; use dissected maps, and answer fairly well.

III. *Writing*—Same Class. Form letters well, and write in a fairly legible manner.

IV. *Canadian History*—The examination of this class comprised a test of their knowledge of the chief wars and their causes and results; the chief treaties and Acts of Parliament, with their provisions; most of the important events of each epoch in Canadian history, and brief biographies of the most eminent men. The answering showed that they had been well taught, and thoroughly drilled.

V. *Grammar*—Class D. This class was given a good drill in the definitions, and examined rather minutely on the inflections of gender, persons, number, comparison, etc., also parse simple sentences very fairly. The knowledge obtained in the short time they have been under instruction on this subject, is very creditable to the teacher.

VI. *English Literature*—The class in this subject consisting of 20 members is a select one, and embraces most of the best and brightest pupils in the Institution. The work of the past year embraced the history of English Literature, from Beda's time to the present, a general review; more minutely, Paradise Lost, 1st and 2nd Books; Shakespeare's Henry VII.; Scott's Lord of the Isles, and Whittier's poems. The greatest interest is manifested in the subject by all the class. The answering, as on former occasions was admirable, and the recitations from memory of choice passages from the several authors was shared in by every individual in the class, each being desirous of contributing something to the common stock of information. We cannot too strongly commend the work done here, the industry and enthusiasm of the class, and the zeal and energy of the teacher. Any school might be proud of such pupils.

VII. *English History*—A Class of 10 advanced pupils. Limit of work, from 1688 to present time. A familiar acquaintance with the general history of the period shown, also a good knowledge of the constitutions and other changes effected in the interval.

Mr. McCarthy's Classes.

I. *Reading*—Class D. This is a primary or rather combination of classes. All doing as good work as one might expect. The advancement made by some since last examination, is well marked.

II. *Writing*—Class E. These little ones are struggling with the elements of the subject. Several have mastered all the small letters and can write small words. The class contains some that have but recently entered the Institution, and from whom, therefore, not much could be expected. A good beginning has been made, and all who are able to learn are certainly doing well.

III. *Gymnastic Classes*—The teaching here is excellent, and the pupils take great interest in the exercises, and are suitably benefited by them.

IV. *Grammar*—Class E. A pupil teacher in charge of 15 pupils. Several know the definitions and inflections well and can parse very easy words; others are deficient, but this is no fault of the teacher.

V. *Arithmetic*—Class E. Pupil in charge. The pupils in this class are quite young. Some of them will never be very apt in arithmetic; a few are exceedingly bright. They are in different stages of advancement, and were examined individually. Fair work has been done; some of the little ones performed operations in addition and subtraction very well. They have also been taught to count to quite high numbers, and understand the simple relations of numbers fairly well. In the examination of this class, wooden blocks were employed and the pupils showed much ingenuity in their use.

On the whole, classes are well taught and the Institution seems to be in a most satisfactory state. We have to thank the Principal and his staff for courtesies extended to us during the examination.

Musical Department.

This was examined by Professor Aldons, of Hamilton. A copy of the report made by him is appended:—

In submitting my report on the examination of the various branches of the Musical Department, which I held in the Blind Institute in Brantford, on May 26 and 27th, I could at once remark on the *entente cordiale* that exists among the teachers, and between the teachers and their pupils; also, on the gratifying progress that is observable in those pupils who came under my notice last year, the advance in some cases being very remarkable."

It is unnecessary to make special mention about each of the classes. The piano classes under Mr. Day, Miss Callaghan, Miss Moore and Miss McNish; the organ pupils under Mr. Day; and the melodeon pupils under Miss McNish; the vocal tuition under the care of Mr. Howson; the violin class under Mr. Baker; the counterpoint class under Mr. Day; and the harmony classes under Mr. Day and Miss Moore; the point class under Miss Moore; and the tuning under Mr. Raymond. In all classes the same careful teaching and kindly attention are to be found that I commented on before. Classes under the care of pupil teachers are a new introduction since last year, which must be reported. It is of course a necessity that those who are going to practice teaching for a livelihood should have some opportunity of beginning to teach, and of getting some experience in that line. In my opinion this should be done under the supervision and in the presence of one of the regular teachers, otherwise many little, but very essential points, are likely, if not certain, to escape the notice of the pupil teacher, who has defective vision and who has not yet found out the way of detecting faults which are at once apparent to a pair of good eyes, such as faulty finger position and action, absence of the clinging touch which is necessary to true legato-playing, which absence seems to be a peculiarity of blind students in their beginning stages. In view of this latter fact I would urge on those who take the pupil at the very beginning of their music studies, to carefully and rigidly insist first on the correct binding of the tones together, which is so essential an element in sympathetic playing. The fact that the blind have to trust to their touch instead of their eyes to find their notes, seems to induce a habit of holding their arms suspended over the keys and allowing the fingers to touch the notes in a light and jerky manner, a habit which can easily be stopped at the outset, but is well nigh ineradicable when once well rooted. The hearty chorus and hymn singing which forms a part of their daily worship, and which is under the care of Miss Callaghan and Mr. Day, is a very pleasant and noticeable feature, and cannot fail to have a very beneficial effect on all those who participate in it. I would again suggest to their attention, the advisability of remodelling the arrangements with regard to the pianos. A new Mason & Risch upright, and a J. R.

Williams upright, in the first parlour, are a good addition to the stock; but I cannot help thinking that it would be wiser to adopt the plan in vogue in colleges and schools, to make an arrangement with some pianoforte firm to keep the Institute supplied with good instruments for so much per annum. Where the pianos are the property of the Institution they must deteriorate with years and have to be replaced one by one with new ones, whereas under the other system the Institute would have no decayed pianos within its walls, except a few for the tuners to practice upon. The pedal harmonium needs a thorough overhauling, and I should strongly recommend the clarinet stops to be filled in in the organ (as prepared for), as it is a stop that is much used, and there are now sufficient pupils who play advanced music to render that stop not only desirable but almost necessary. The grading of the pupils into various stages of ability and progress seems to be successful, and will undoubtedly tend to raise a healthy spirit of emulation among the pupils.

In closing my report I must thank the Principal and the whole staff for the kindness which I experienced during my stay.

MAINTENANCE EXPENDITURES.

The amount expended in maintaining the Institution during the past twelve months is shown in the subjoined statement. The same information as regards the previous year is also given :—

Services.	Year ending 30th September, 1885.		Year ending 30th September, 1886.	
	Total Expenditure.	Annual cost per pupil.	Total Expenditure.	Annual cost per pupil.
	$ c.	$ c.	$ c.	$ c.
Salaries and wages	15,421 67	116 83	15,658 56	118 63
Medicine and medical comforts	100 15	0 76	87 34	0 66
Butchers' meat, fish, etc	3,030 10	22 96	2,982 06	22 59
Flour, bread, etc	897 56	6 80	888 68	6 73
Butter and lard	963 68	7 22	906 13	7 32
General groceries	1,885 74	14 31	1,893 58	14 12
Fruit and vegetables	223 86	1 70	308 80	2 34
Bedding, clothing and shoes	616 61	4 67	660 05	5 00
Fuel	3,634 56	27 56	2,961 50	22 36
Light	1,262 45	9 56	963 50	7 30
Laundry, soap and cleaning	270 13	2 99	349 69	2 63
Furniture and furnishings	511 06	3 87	494 05	3 74
Farm, feed and fodder	958 31	7 26	895 86	6 79
Repairs and Alterations	1,022 65	7 75	896 54	6 79
Advertising, printing, postage, etc	575 40	4 30	675 19	5 11
Books, apparatus and appliances	709 91	5 38	718 32	5 44
Miscellaneous	1,183 77	8 97	1,218 08	9 23
Totals	33,385 52	252 92	32,674 73	246 78

In the following pages will be found the reports of the Principal and Physician, also statistical tables relating to the pupils.

PRINCIPAL'S REPORT.

ROBERT CHRISTIE, ESQ.,

Inspector of Prisons and Public Charities:

SIR,—I have the honour, as Principal of the Institution for the Education of the Blind, to submit my report for the year ending September 30th, 1886.

ATTENDANCE OF PUPILS.

The total number of pupils registered during the year was 141, or three less than in the preceding year. Of the 141, 78 were males and 63 females. One hundred and ten of our last year's pupils are now in attendance. Of these 61 are males and 49 females. Thirty-one—17 males and 14 females—have, consequently, not yet returned, and are accounted for as under :—

	Males.	Females.	Total.
Graduated in willow work, with full outfit	1	0	1
" with partial outfits	5	0	5
Graduated in literary, musical and industrial classes	2	0	2
" literary classes, partially in music	0	1	1
Left finally with partial results	0	4	4
Found employment, (partial sight)	1	0	1
Left owing to poor health	2	1	3
" home requirements	0	2	2
" removal from Canada	1	0	1
Excluded on account of weak intellect	0	1	1
" grave misconduct	0	1	1
Detained at home temporarily from various explained causes	4	4	8
Absence not accounted for	1	0	1
Total	17	14	31

In addition to the 110 pupils of last session who have, so far, presented themselves, 5 former pupils—2 males and 3 females—not in attendance last session, have been re-admitted. The new admissions to date number 17—13 males and 4 females—so that our total pupil population at the present time is made up as follows :—

	Males.	Females.	Total.
Pupils of last session	61	49	110
New pupils	13	4	17
Former pupils re-admitted	2	3	5
Total	76	56	132

This shows an attendance of 8 in excess of the number on the register at the corresponding date last year.

From reports received from pupils temporarily absent and applications in hand, I am led to believe that this excess will—if no disturbing causes intervene—be fully maintained throughout the session, and that our average will approximate closely to 140 as against 132, the average attendance of last session.

The respective ages of the new arrivals are as follows :—

Years.	Males.	Females.	Total.
6	2	0	2
9	1	3	4
10	1	0	1
11	1	0	1
12	1	0	1
13	2	0	2
17	1	0	1
22	1	0	1
23	1	0	1
24	1	0	1
31	1	0	1
37	0	1	1
Total	13	4	17

For the admission of the two juniors, both under age, in the foregoing list, very strong reasons existed. The applications of the over-age persons were most carefully scrutinized, and only acceded to after a special case had in every instance been made out in favour of the applicant. In no one of them could admission very well have been refused. While the objection to the reception of adults in such an Institution is never to be lost sight of, some little risk must at times be incurred in order to avoid doing to much afflicted and often very deserving young men and women a lifelong injury. I am bound, moreover, to add that our adult pupils have usually shown a proper sense of their privileges, and have given very little trouble.

Pupils who have Left.

A few explanatory remarks with reference to pupils who have left the Institution during or at the end of last session, may here be in place. The five male pupils who graduated with partial outfits had, with one exception—a pupil of four years' standing—been for many sessions in the Institution, and under industrial instruction. All were diligent in their efforts to learn, but none of them had the mechanical ability necessary for the attainment of the position of full graduates. An exception was, consequently, made in their favour. They left with liberal supplies of tools, models and willow ware, and are, I believe, all now earning a livelihood by making and vending the less elaborate classes of willow goods. The two pianoforte tuners who graduated are also doing well. One of them is carrying on his business on his own account, the other is in the employment of Messrs. Mason & Risch, the well-known pianoforte manufacturers, of Toronto. Of the pupils the state of whose health led to their removal, two are constitutionally delicate, and are better on that account at home; the third was in the best of health at the close of the session, and any illness in her case must have been of vacation origin. One of the two first mentioned is able to work occasionally at his trade as a basket-maker, the other, a talented lad, is pursuing his studies in music under private tuition.

The Staff.

The vacancy caused by the resignation of Mr. W. P. Day, our senior music teacher, who left in order to accept a similar position in the Illinois Female College, conjointly with an appointment in the Illinois Institution for the Blind, has been filled by Mr. Edward H. Knight, who, like Mr. Day, is a graduate of the New England Conservatory. The duties of junior male officer, which include, with the charge of the male pupils out of school hours, the instruction of some of the primary literary classes, and a large class in calisthenics, are now performed by Mr. Francis Flanagan, in the place of Mr. Joseph McCarthy, who resigned in order to enter upon a special course of collegiate studies.

Miss Mary Jane Brown, a former pupil who had for some years acted as assistant instructress in the workroom, also retired at the vacation, and her successor has not yet been appointed. While occasional changes are inevitable, it is gratifying to know that they occur from no unpleasant cause, and that the majority of the staff are officers of such experience and standing in their profession as to leave nothing to be desired on that score. To one and all of them my cordial thanks are due for their kind and faithful co-operation.

The Literary Classes—Kindergarten.

The general arrangement of the literary classes continues to be nearly the same as last year. The numbers of pupils constituting these classes are as follows :—

In Arithmetic	76
Grammar	68
Geography	67
Reading	66
Literature	20
Writing	97
Natural History and Physiology (Boys)	7
Object Lessons	34
English and Canadian History	20

For full information as to the condition of the literary classes and the progress of the pupils, reference may be made to the Examiners' reports, which have for the past six sessions formed a very interesting feature in our annual records. While the Examiners find little to criticise, and speak in only too generous terms of the state of our literary department, the necessity for progressive improvement, wherever possible, must not be lost sight off. I am conscious of the need in this particular for the more systematic training of the minds and perceptive faculties of our younger pupils during the earlier stages of their Institution life than we have yet attained. This, in my opinion, only the Kindergarten system, thoroughly and scientifically applied to the needs and condition of the blind, can fully supply, and to teach this properly, the systematic training of the teacher for this particular work is required. The two Institutions that rank highest on this Continent as models in respect of the education of the Blind, whether as regards their appliances and apparatus, or the experience brought to bear on their management, are respectively the one in New York city, under the superintendence of Mr. W. B. Wait, and the Perkins Institute, under Mr. M. Anagnos, the son-in-law and successor of its founder, Dr. Howe. At both of these the Kindergarten system is being carried out on a liberal scale. From my conversation with Mr. Wait during the sittings of the late Convention of Instructors of the Blind, I was convinced of the existence of two Kindergartens, a false and a true one, or, rather, of one that might be termed empirical and another properly designated scientific. The danger of adopting the former in mistake for the latter is to be carefully guarded against, especially when it is remembered that the pupils are those whose whole method of thinking and reasoning has to find in our educational processes its ground-work. The propriety of introducing the Kindergarten system in this Institution under a properly trained instructor, is a matter calling, I venture to suggest, for early consideration.

The Music Classes.

The plan of grading the classes under instruction on the pianoforte has, so far, proved very satisfactory. It had been carried out hitherto rather tentatively and experimentally than as a perfect or complete arrangement, but will now go into force in its entirety, and no pupil will be changed from one grade to another except, as in the case of the literary classes, after a report by the teacher to the Principal. A grade 1 course will also be adopted with the pupils under Mr. Knight's tuition on the pipe organ. I

most fully concur in the general purport of the Examiner's remarks, as to the necessity for the correct training of beginners. Mr. Aldous probably scarcely realizes how readily, or by what means even a blind pupil-instructor, if properly taught, will detect some faults that would seem to be only discernible by the eye. But he well advises that, at the commencement of the learner's career, the experienced and seeing instructor should be on hand to supervise the work of the pupil teacher, and to correct through the latter's instrumentality the defects of the pupil. In accordance with this view, I have arranged for Miss Callaghan, our senior lady music teacher, to superintend daily in person, three of the pupil-teachers' junior girls' classes. Mr. Knight's time is too fully occupied for him to give daily attention to the three boys' classes, under as many male pupil-teachers, but on one day in the week they are subject to his inspection and examination.

The Examiner's recommendation that our pianos should be hired instead of purchased is entitled to all respect, although I am unable for various reasons to advise that it should be acted upon. In the first place, I doubt whether any leading house would care to accept such a contract on reasonable terms, in view of the external defacement,—to a great extent from unavoidable causes—to say nothing of internal deterioration to which the instruments are subjected at the hands of a mixed crowd of blind pupils. In the next place, the owner would almost certainly insist on tuning his own instruments, but it is of the very essence of our method of instruction in that branch that our senior pupil tuners should have all the practice the care of our own pianos secures for them—and of this they have little enough. Again, our old instruments supply "subjects" for the tuning classes to practice daily upon and, if by the natural process of damage and decay we failed to secure a supply of old instruments, we should have to buy others for the purpose. Our stock of pianos is now much improved; we have a very fair number for present purposes and most of them in good condition. Our greater need now is more rooms for music practice, particularly in the east wing where we have some instruments in very objectionable situations. The numbers of pupils in the several branches of musical tuition are as under:—

In Pipe Organ	5
Pianoforte	82
Reed Organ	8
Violin	4
Vocal class	38
Harmony	13
Point Print Music Writing	10

The Tuning Class.

A place in this class is an object of ambition with many of our male pupils. There are now 21 under instruction, of whom 15 are taught by the Instructor, Mr. Raymond, personally, and 6 by advanced pupils. The two seniors have charge of all the tools and are expected to keep the pianos of the Institution in good order. The purchases of new instruments during the past year have enabled me to place an additional piano at the service of the tuning class, which is consequently well supplied with opportunities for practice. Every pupil is afforded a sufficient time for practice daily. Encouraging reports continue to be received from pupils who have graduated from this department; at the same time, caution is necessary lest it should be over-crowded. Pianoforte tuning is not a merely mechanical acquirement, nor, on the other hand, will every pupil with a fair talent for music make a first-class tuner. To turn out half qualified tuners would soon discredit the employment of the blind in this capacity altogether, and render their struggle with seeing competition more difficult than ever. Pupils and pupils' friends are apt to make too light of these considerations and turn from the homelier but often more certain trade of chair and basket making, to tuning, as being a vocation in their view, less laborious and more refined. It will probably be necessary to impose some check in the shape of a test, ere long, on the crowd of eager aspirants for a place in the tuning class.

THE WILLOW SHOP.

In this department everything has worked smoothly and pleasantly during the past year. Six pupils, as already stated, graduated with complete or partial outfits at the end of the late session and 21 are now working wholly or for certain hours daily in the willow shop. The Trade Instructor's report is as follows :—

To the Principal :—

SIR,—I have the honour to submit my report upon the operations of the workshop during the year ending September, 30th, 1886.

The session has been one of fair progress on the part of the pupils engaged in the workshop. Six graduated at the close of the session ; one of this number received a complete outfit of tools, models and materials, having completed the full course of instruction ; the others were granted partial outfits of tools, models and materials sufficient to enable them to produce such articles as they were thought competent to make. All six are now working at their own homes, and I have already received encouraging reports of their success from several of them. The behaviour of the shop pupils during the entire session has been most exemplary, their industry commendable and their contentment gratifying—these qualities being allied to cheerfulness (an excellent working quality). I am enabled to furnish the following statement, which shows the amount of reliable work made during their nine months of training.

Sales by Trade Instructor	$674 85
Work on hand not sold	200 00
Total	$874 85

In consequence of having so many graduates at the close of last session, the number of pupils qualified to receive vacation supplies of willow was considerably reduced, but ten pupils were, nevertheless, granted a supply of willow and the loan of a few tools and models. The following statement shows the excellent result :—

W. D.	earned	$28 00
S. W.	"	37 00
F. N.	"	25 00
M. N.	"	25 00
T. P.	"	25 00
A. S.	"	6 00
F. P.	"	12 00
T. E.	"	15 00
J. S.	"	20 00
S. L.	"	28 00
S. S.	"	33 00
H. S.	"	10 00
Total vacation earnings		$264 00

On the return of the above pupils at the commencement of the present session, I was surprised to find that one of the number had, in addition to his sales, made an assortment of willow-ware for exhibition at the London Fair and had received the first prize, $4.00. Another of our pupils (a graduate) recently wrote me that he was very busy making an assortment of work, also for exhibition, and enclosing a post-office order in payment for common baskets, which he was too busy to make himself.

Perhaps the principal feature of last session's work was the making of a large assortment of willow-ware by our pupils for the Educational Exhibit, sent to the Indo-Colonial

Exhibition. This task imposed upon pupils and Instructor a work beyond their ordinary ambition, but, if by aiming at the sky we have managed to strike a tree, we shall feel rewarded for spending a great deal of time and additional labour in preparing the work for exhibition.

At the present time there are twenty-one pupils in the workshop making satisfactory progress.

I have the honour, etc.,

THOS. TRUSS, Trade Instructor.

THE SEWING ROOM.

In this department 41 pupils, all females, receive instruction. The retirement of the Assistant Instructress, Miss Mary J. Brown, has imposed additional duties on the Instructress, Miss Loveys, who, however, is frequently able to secure assistance from some of the more advanced pupils in teaching beginners. The Bead Class will be in operation in a few days.

THE KNITTING ROOM.

In this room a quantity of very beautiful work, both machine and hand-knitted, has been turned out during the past session. The result more than justifies the change made some time since, in regard to the character of the work produced and the payment of pupils employed in its production. The quality is higher, the variety greater, and the tasteful and ornamental is largely substituted for the coarse and homely goods of former years. I was much struck when at New York with the appearance of the well furnished and carpeted apartment, with its show-cases of finished work, which formed the sewing, knitting and fancy work-room of that Institution. If we have no room to spare for this purpose of the dimensions of the one I referred to, our rooms are light and lofty and could easily be made more attractive than they are at present, at a small expense, while, at the same time, the work could be protected from dust and handling and be more effectively displayed than it is. The pupils in the knitting classes number 49.

THE INDO-COLONIAL EXHIBITION.

At the suggestion of the Hon. Minister of Education, an exhibit of the apparatus used and specimens of the products of the industries taught in this Institution was forwarded to the Indo-Colonial Exhibition, held this year in London. It included selections from goods manufactured in the willow shop, models employed in their production, some very beautiful hand and machine needlework, elaborate and tasteful knitted goods, and bead and fancy work. These were accompanied by a chart, descriptive of the Institution in all particulars, and photographic views of the Institution and site, as well as photographs of the various class and work rooms and the pupils engaged at their several duties. A raised sectional map of Ontario, point print writing guides, and models and stuffed specimens used in object teaching, were also shown.

THE LIBRARY.

The following books in embossed type or point print have been added to the Pupils' Library during the past year. In embossed type—Hawthorne's Scarlet Letter; Scott's Poems; Kingsley's Greek Heroes; Quentin Durward; What Katy did; Romeo and Juliet; Prescott's Conquest of Peru; Thomas à Kempis; Holmes' Autocrat at Breakfast; Prescott's Mahomet; Dicken's Tale of Two Cities; In point print—Tales of Adventure; Smiles' Self help; Tales from Shakespeare; Chapters on Animals; Æsops Fables; and Thomas à Kempis.

Health.

The general health of the pupils during the past year has been excellent. Dr. Corson's report will no doubt enter into fuller details on this point. Cases of constitutional delicacy will always be more or less numerous in institutions of this kind, and frequently lead to the conclusion that a temporary respite from continuous study is desirable. A recommendation from the medical officer to that effect always meets with immediate attention. The absence of contagious disease and of other complaints arising from local causes is a powerful testimony to the general healthfulness of the site and the efficiency of the sanitary arrangements of the Institution.

Discipline.

The principles upon which discipline is maintained at this Institution have been fully discussed in previous reports. The conduct of the pupils as a whole during the past session was most satisfactory and extreme measures had seldom to be resorted to. As already mentioned, one case of expulsion—and I am happy to say only one—has to be reported. One of the female pupils, a girl of 16, was guilty, for the second time, of wilfully destroying the clothing of her fellow pupils. This was done in sheer mischief and without any pretence of provocation. A low order of intellect combined with very dull moral perception, made the case a somewhat hopeless one, and the girl's removal was necessary in the interest of safety as well as discipline.

Vacation Improvements.

During the late vacation our Engineer and his Assistants have effected very extensive improvements in the heating arrangements of the building especially the school and work-rooms and dormitories, in the east wing. The last stove has been removed from the main building and I anticipate that not only will a considerable saving of fuel be secured but that the personal comfort of the female pupils particularly will be greatly enhanced by the better and more equal distribution of heat. These important alterations have been accomplished at a comparatively trifling cost. The whole of the building is now well heated, but economy will be consulted by the substitution of radiators for coils and pipes in several places and I recommend that a small amount for this purpose be appropriated.

The condition of the exterior of the building has been much improved by the stopping of the wood-work wherever shrunken, the pointing of the masonry, and the painting of the whole of the former. The old building had not been re-painted since its erection fourteen years since and its condition and appearance were hardly creditable. Rapid decay would have ensued had this matter been longer neglected. There are places even now where another coat of paint might be given advantageously. The exteriors of the Principal's and Engineer's houses will both require to be painted next year. The new material known as Alabastine for colouring walls and ceilings has been used by us in several instances either as a ground work or substitute for paint. In this mode of using it Alabastine has answered well, while it is a great improvement when applied in place of white-wash.

The Grounds.

The most marked improvement in the grounds, has been the removal of some fifteen hundred feet of the old six-foot picket fence on the southern and eastern front of the grounds, and the substitution in its place of a simple iron pipe rail, supported at eight foot distances on turned and painted cedar posts. The gates at the two main entrances are removed altogether. To the propriety of making this desirable change, attention was directed in my last report. It was brought about more speedily than I had ventured to anticipate by two furious storms of snow and rain respectively, both accompanied by high wind, which made gaps two to three hundred feet in length, and shattered to pieces large portions of the fencing blown down. The whole of the new work has been done at less

cost than the renewal of the broken fence and the substantial repair of the standing part would have entailed. The whole of our ornamental grounds are now thrown open to public view without obstruction, and as approached from the city present a very beautiful appearance. This will be heightened by the seeding down with mixed grasses of the lower portions, and planting trees and evergreens at suitable intervals. Our trees were last year subjected to a thorough pruning by which they have decidedly benefited.

The expropriation some time since, of twenty-two acres of land on the northern and western boundary of the Institution estate, chiefly for the purpose of maintaining the isolation of the premises, has made it necessary to consider how this new property may best be utilized. The higher portion on a level with the Institution, and immediately in its rear and broken at its western extremity into ravines and rolling land, is well adapted with very little planting and laying out for the purposes of a public park. The trees already planted in rows and groups, will ultimately form a protection to our rear premises while giving shelter to delightful walks and drives, serving, I trust, not only for a pleasant resort for our own pupils, but also for the citizens of Brantford. The lower and level portion of the new property was seeded down to clover last year, and during the past summer has been fenced and used very profitably as a pasture field for our cattle.

The Farm and Garden.

The farm and garden this year have been very productive. Although the dryness of the late summer months retarded the development of our root crops, and has more or less affected the ultimate yield, the quantity obtained has been good, and in some cases even remarkable. The land is gradually becoming cleaner under vigilant cultivation, and the crops would not discredit soils of much greater richness.

Improvements Suggested.

It is not, I presume, necessary for me to repeat arguments used time and again in favour of the three great improvements which, sooner or later, will probably have to be undertaken. A new roof, the extension of the east wing—the last mentioned including more class rooms and dormitories, music and practice rooms, a girls' trunk and play room, and a female hospital ward—and finally, a gymnasium, the value of which I imagine cannot even yet be sufficiently understood or appreciated, or it would have been erected long ago; these are the additions and improvements to which I refer. I had recently, when at the New York Convention, the opportunity of inspecting photographs of the drilled companies of blind youths in the Pennsylvania Institution, where, as well as at New York and Boston, the system of physical training is thoroughly carried out, and I am convinced that in a hygienic not less than a recreative sense, a gymnasium is essential to make our work here complete.

The bakery of the Institution is not what it ought to be in many respects. The oven is of the old fashioned description, and the general arrangements are below the mark altogether. I respectfully advise an appropriation to cover a reform in this department of our domestic economy.

The carpenter's shop has long been condemned as too small, as well as damp and unhealthy. Its removal, as once proposed, to the room in the basement formerly used as a Bursar's store-room, could only partially mend matters. If, too, the carpenter were in a more accessible place, his shop would be an object of interest and resort to some of our male pupils, not a few of whom have quite a little mechanical skill, and enjoy in a simple way, any opportunity afforded them for exercising it. I propose, in order to meet all our needs in this regard, to appropriate a part of the western coal shed which is far larger than necessary for the accommodation of the reduced quantity of small coal we now require. The portion taken can be boarded off, the upper part to be floored and used as the work-shop, and the lower part as a cellar for storing lumber. The shop will then be a dry, roomy and airy apartment, easily warmed and accessible from the boys' quarters. The expense will be limited to the cost of the lumber needed.

ACKNOWLEDGMENTS.

I cannot close my report without again acknowledging the kind consideration and friendly attentions extended to our pupils by the clergy of all denominations and citizens of Brantford, generally, during the past year.

I have the honour to be,
Sir,
Your obedient servant,

A. H. DYMOND,
Principal.

SUPPLEMENTARY REPORT.

ROBERT CHRISTIE, ESQ.,
Inspector of Prisons and Public Charities:

SIR,—My report recently forwarded to you deals exclusively with the state of the Institution and matters connected therewith, during the year ending September 30th, 1886. But, during the few days devoted to the compilation of that report, and while it was necessarily still in my hands, circumstances occurred to which I shall be glad to have an opportunity of referring, without waiting for a whole year to elapse before they are noticed. At the commencement of the present month, a state of almost unusual healthiness appeared to pervade the Institution. About the 4th of the month two pupils, both boys, complained of sore throat attended with feverish symptoms. One of these cases was clearly the result of a bad cold, and a day or two's nursing saw the lad again at his studies. The other, a boy of 14, named John Alexander, from East Whitby, became worse, but his case did not excite anxiety until the morning of the 8th, when it developed into diphtheria of a malignant type. He was immediately placed in our excellent male hospital ward in charge of an experienced sick-nurse, and effectually isolated from the rest of the pupils. In a few hours two other boys, one less than eight and the other under seven years of age, both became affected and were also placed with a second nurse in the hospital. The terrible nature of the disease and the rapidity with which a second and even third pupil was attacked, made the outlook for the moment a sufficiently appalling one. Perhaps nowhere could it present more difficulties than in an institution for the blind. In some instance the immediate dispersion of the pupils would seem to be the easiest and safest resort. But blind boys and girls require most careful arrangements, every detail of which must be perfect, before they can be dispersed. Experience has taught us that many days must be allowed for notices to reach parents and parents to be heard from in reply. And until this is done blind pupils cannot start on their way home. Again if diphtheria were really upon us, how could we say who was or who was not already infected, and if to detain the pupils here entailed some risk, to scatter them all over the province, might have been to spread contagion far and wide. Moreover, it was then known and correspondence has since made me more fully conscious of the facts, that diphtheria prevailed in close neighbourhood to many of our pupils' homes, and this would have made their return to the latter objectionable, if not actually dangerous. In face of objections to dispersion, so many and serious, I determined with the concurrence of the medical officer, Dr. Corson, on the intermediate course of advising the whole of the pupils' parents or guardians, of the state of affairs, and giving them the option of removing pupils or not, as they might deem most expedient. As the disease had appeared among the male pupils only, it was decided that all association between male and female pupils in class rooms or at roll call, (the only occasion on which they are together) should cease, class and other work was put on short time, and every opportunity taken for giving the benefit of fresh air and out door exercise to the whole of the pupils. The Institution

was closed to visitors, and the practice of allowing the male pupils to visit the city was discontinued. On the morning of Sunday, October 10th, John Alexander, the boy first attacked, and by whom there is every reason to believe the disease was communicated to others, succumbed to the disorder, his death being the first that had occurred in the Institution for nearly six years. Meantime your prompt arrival with Dr. Bryce, Secretary of the Provincial Board of Health, on the evening of Saturday 9th, afforded me an opportunity of discussing freely with you the steps to be taken in all eventualities, and for the suggestion of any possible remedial or precautionary measures. Obviously the first thing to be done was to discover, if practicable, the cause of the mischief, and some defective drainage, or the presence of sewer gas in the building naturally suggested itself. But this theory could not be maintained, for, although our sewers and drains were not as a whole systematically ventilated, the ventilation existing was quite sufficient to relieve any pressure on the sewer gas, while every trap and fitting was found to be in good working order. While, therefore, I rejoice in the substitution under your instructions and with the approval of the Board of Health, of a complete and scientific system of drain ventilation for what was before partial and accidental, I have the strongest possible belief, which Dr. Corson shares with me, that the disease was imported, that it had no local origin and that the limitation of its ranges to those who had been in personal contact and the immediate result of means taken to check its diffusion, affirm beyond all question the great healthfulness of the Institution and its surroundings, which has before now, rendered contagious disease—although in a less terrible form—comparatively harmless. Beyond the three lads first affected only one pupil (a boy of the same age as John Alexander and who had been in the latter's company at the time his isolation was first ordered) was attacked, but in so mild a form as to occasion little anxiety. Not one of the female pupils, nor any of the male pupils except those mentioned, have showed the least symptoms of diphtheria, but have all been generally in exceptionally good health. One of the female servants, who assists the boys' nurse in attending to the wants of junior pupils, and who was consequently in contact with the boys, sickened, was confined to her room for some days with a diphtheretic throat, and a sick nurse, kindly furnished by the authorities of our local hospital, also needed medical care from the same cause. Both have been for some time now out of the doctor's hands; the two younger pupil invalids are completely convalescent, and the lad last laid up will be released from the nurse's charge in a day or two. Having thus given a narrative of the visitation, I may be allowed the further privilege of discharging some further duties in connection with the matters referred to. I must first acknowlege the cordial support and active co-operation, from the first appearance of the disease, of the whole staff of the Institution. The calm and unexcited attitude of their officers has had not a little to do with allaying the very natural fears of the pupils, who have, as well as their friends at home, been kept well informed of everything occurring, whether for the moment hopeful or discouraging, and whose conduct has throughout been most exemplary. I have also to recognize gratefully the confidence and sympathy expressed by parents and friends of pupils, whose letters at this time have been particularly kind and reassuring. Some fourteen pupils, only, returned home, all with my fullest consent, and five of the number I may say, for various reasons, at my own suggestion. All will now be at liberty to return. Dr. Corson has been in close attendance on the invalids, and we have conferred daily on the bulletins to be issued and precautions taken. The Matron, Miss Dunn, has had to bear a very large share, both of work and responsibility, and has been unwearied and indefatigable in her attention to the needs of all. Let me add one word more in conclusion. The arrest of this fearful disease before it had made further progress was due, undoubtedly, under Providence, to our ability to isolate effectually, and this depended on the possession of our male hospital ward. On the girls' side of the building, we are still without that requisite. The moral is plain.

I have the honour to be, Sir,

Your obedient servant.

A. H. DYMOND,
Principal.

Brantford, Oct. 22nd, 1886.

ONTARIO INSTITUTION FOR THE BLIND.

Statistics for the Year ending 30th September, 1886.

I.—NATIONALTIES.

——	No.	——	No.
American	4	Irish	38
Canadian	58	Norwegian	1
English	35	Scotch	18
French	5	Wendish	2
German	3	Total	164

II.—RELIGION.

——	No.	——	No.
Baptists	7	Lutherans	3
Bible Christians	1	Methodists	42
Congregationalists	6	Presbyterians	29
Children of Peace	2	Roman Catholics	27
Episcopalians	43	Salvationists	2
Jew	1		
Christians	1	Total	164

III.—AGES.

	No.		No.
Five years	1	Seventeen years	9
Seven "	2	Eighteen "	9
Eight "	3	Nineteen "	8
Nine "	8	Twenty "	10
Ten "	8	Twenty-one "	4
Eleven "	6	Twenty-two "	14
Twelve "	7	Twenty-three "	8
Thirteen "	15	Twenty-four "	3
Fourteen "	7	Twenty-five "	3
Fifteen "	[illegible]	Over twenty-five	21
Sixteen "	11	Total	164

IV.—ATTENDANCE.

	Males.	Females.	Total.
[illegible] portion of year ending 30th Sept., 1872	20	14	34
[illegible] year ending 30th September, 1873	44	24	68
" " " 1874	66	46	112
" " " 1875	89	90	179
" " " 1876	84	64	148
" " " 1877	76	72	148
" " " 1878	93	82	175
" " " 1879	100	90	190
" " " 1880	105	98	203
" " " 1881	103	98	201
" " " 1882	84	73	157
" " " 1883	88	71	159
" " " 1884	71	69	140
" " " 1885	86	74	160
" " " 1886	93	71	164

V.—OCCUPATION OF PARENTS.

——	No.	——	No.
Actor	1	Merchants	9
Agents	5	Machinist	1
Auctioneer	1	Miller	1
Accountant	1	Painters	3
Barber	1	Plumber	1
Bookkeepers	2	Physicians	2
Blacksmiths	3	Soldier	1
Butchers	2	Salesman	1
Carpenters	9	Stonemason	1
Carpet Cleaner	1	Shoemakers	3
Clerks	3	Surveyors	2
Conductor	1	Tailor	1
Clergyman	1	Tanner	1
Cabinet Makers	2	Tinsmith	1
Drover	1	Tradesman	1
Engineers	2	Vessel Agent	1
Farmers	54	Veterinary Surgeon	1
Gardener	1	Waggon-maker	1
Fishermen	2	Weaver	1
Hotel-keeper	1	Unknown	5
Labourers	30		
Lawyer	1		
Manufacturer	1	Total	164

TABLE VI.—Shewing Cities and Counties from which pupils were received during the official year ending 30th September, 1886.

County or City.	Male.	Female.	Total.	County or City.	Male.	Female.	Total.
City of Belleville	0	1	1	County of Middlesex	1	3	4
County of Brant	2	2	4	District of Muskoka	2	0	2
City of Brantford	3	1	4	County of Norfolk	0	1	1
County of Bruce	2	3	5	" Northumberland	0	0	0
" Carleton	1	0	1	" Ontario	2	2	4
" Dundas	1	1	2	City of Ottawa	4	0	4
" Durham	0	0	0	County of Oxford	0	1	1
" Elgin	0	3	3	" Peel	1	0	1
" Essex	2	5	7	" Perth	1	2	3
" Frontenac	2	1	3	" Peterborough	1	0	1
" Glengarry	1	0	1	" Prince Edward	2	0	2
" Grenville	0	0	0	" Renfrew	5	3	8
" Grey	0	4	4	" Russell	1	0	1
City of Guelph	1	0	1	City of St. Catharines	0	0	0
County of Haldimand	4	2	6	" St. Thomas	2	1	3
" Halton	1	0	1	" Stratford	1	1	2
City of Hamilton	4	3	7	County of Simcoe	1	3	4
County of Hastings	0	1	1	" Stormont	2	0	2
" Huron	3	2	5	City of Toronto	9	3	12
City of Kingston	2	2	4	County of Victoria	2	0	2
County of Kent	0	2	2	" Waterloo	1	1	2
" Lambton	4	3	7	" Welland	1	0	1
" Leeds	2	0	2	" Wellington	4	1	5
" Lanark	0	0	0	" Wentworth	1	4	5
" Lennox	2	1	3	" York	8	4	12
" Lincoln	1	2	3				
City of London	3	2	5	Total	93	71	164

TABLE VII.—Shewing Cities and Counties from which pupils were received from the opening of the Institution till 30th September, 1886.

County or City.	Male.	Female.	Total.	County or City.	Male.	Female.	Total.
City of Belleville	3	1	4	County of Middlesex	7	7	14
County of Brant	4	5	9	District of Muskoka	3	0	3
City of Brantford	6	5	11	County of Norfolk	5	6	11
County of Bruce	5	8	13	" Northumberland	2	6	8
" Carleton	2	1	3	" Ontario	5	5	10
" Dundas	2	2	4	City of Ottawa	7	1	8
" Durham	1	3	4	County of Oxford	2	2	4
" Elgin	2	3	5	" Peel	1	1	2
" Essex	4	9	13	" Perth	4	8	12
" Frontenac	5	2	7	" Peterborough	7	3	10
" Glengarry	3	0	3	" Prince Edward	3	2	5
" Grenville	2	0	2	" Renfrew	7	4	11
" Grey	5	8	13	" Russell	1	1	2
City of Guelph	2	2	4	City of St. Catharines	2	0	2
County of Haldimand	4	4	8	" St. Thomas	2	1	3
" Halton	3	0	3	County of Simcoe	4	7	11
City of Hamilton	9	8	17	" Stormont	1	3	4
County of Hastings	4	3	7	City of Toronto	16	13	29
" Huron	6	6	12	County of Victoria	4	1	5
City of Kingston	3	3	6	" Waterloo	0	1	1
County of Kent	6	4	10	" Welland	3	2	5
" Lambton	6	3	9	" Wellington	8	5	13
" Leeds	7	1	8	" Wentworth	7	6	13
" Lanark	0	1	1	" York	13	8	21
" Lennox	3	1	4	Province of Quebec	2	0	2
" Lincoln	3	3	6				
City of London	7	8	15	Total	232	185	417

TABLE VIII.—Shewing Cities and Counties from which pupils were received who were in residence on 30th September 1886.

County or City.	Male.	Female.	Total.	County or City.	Male.	Female.	Total.
City of Belleville	0	1	1	County of Middlesex	0	3	3
County of Brant	1	2	3	District of Muskoka	2	0	2
City of Brantford	1	2	3	County of Norfolk	0	1	1
County of Bruce	2	4	6	" Northumberland	0	0	0
" Carleton	1	0	1	" Ontario	1	2	3
" Dundas	0	1	1	City of Ottawa	2	0	2
" Durham	0	0	0	County of Oxford	0	1	1
" Elgin	0	1	1	" Peel	1	0	1
" Essex	2	1	3	" Perth	2	1	3
" Frontenac	2	0	2	" Peterborough	1	0	1
" Glengarry	1	0	1	" Prince Edward	2	0	2
" Grenville	0	0	0	" Renfrew	3	3	6
" Grey	0	2	2	" Russell	0	0	0
City of Guelph	1	0	1	City of St. Catharines	0	0	0
County of Haldimand	3	1	4	" St. Thomas	2	1	3
" Halton	1	0	1	County of Simcoe	0	1	1
City of Hamilton	4	2	6	" Stormont	2	0	2
County of Hastings	0	1	1	City of Toronto	7	1	8
" Huron	2	3	5	County of Victoria	1	0	1
City of Kingston	1	0	1	" Waterloo	1	0	1
County of Kent	0	1	1	" Welland	1	0	1
" Lambton	4	3	7	" Wellington	4	1	5
" Leeds	2	0	2	" Wentworth	0	4	4
" Lanark	5	0	0	" York	8	4	12
" Lennox	2	1	3				
" Lincoln	1	1	2				
City of London	3	1	4	Total	79	53	132

PHYSICIAN'S REPORT.

R. CHRISTIE, ESQ.,
Inspector of Prisons and Public Charities.

SIR,—In reply to your request, I herewith enclose the Medical Report of this Institution for the statutory year ending September 30th, 1886 :—

At the time of closing my report last year, one of the staff of teachers, Miss Loveys, was lying in a very critical state from inflammation of the liver, accompanied by jaundice, and other distressing symptoms. By a faithful perseverance in a particular line of treatment, the inflammation was subdued and an excellent recovery followed.

I am reminded by this case to refer to four or five cases of jaundice which occurred in succession during the winter, the severest one of the number being the porter, whose deep yellow color gave striking evidence of the morbid changes in the liver diets. The presence of such a large percentage of cases was probably a mere coincidence and not in any sense due to a local cause. Disorders and derangements of the alimentary track have, however, been the most marked feature in the list of diseases for the year, quite a number taking the form of severe intestinal colic. These attacks could never be traced to any specific cause beyond some indiscretion in the character or quantity of food taken.

As a proof of the continued excellent sanitary condition of the Institution, I am happy to report there are no deaths to record, and furthermore, that not a single case of epidemic disease has found its way into the Institution during the year.

Of course our chief protection against all zymotic diseases must depend upon the integrity of the Institution sewer, and it is fair to presume that all sewage matter is delivered quickly and efficiently at its proper destination. The safety experienced in the past should not, however, lull us into a sense of false security, and we therefore rely upon the vigilance of the engineer to see there are no breaks in the drain pipes and no defects in the traps, by which the deadly sewer gas might escape.

Considerable difficulty is experienced in bringing the pupils to understand the necessity for out-door exercise and fresh air in order to maintain a proper degree of health, and many seek to evade this duty, even where there are special reasons for its observance, and much firmness is necessary in order to enforce this regulation. To this end it would be a satisfactory arrangement if the whole school were turned out for a walk every fair day with the regularity observed in our Ladies' Colleges.

In the first month of our present term, two of our community have been prostrated by serious illness, the house carpenter having first suffered from a sharp attack of dysentery, and afterwards a male adult pupil was laid up with severe acute pluerisy. Both have, however, so far recovered that the carpenter has returned to his work, while the pupil is convalescent.

I have the honour to be,
Your obedient servant,

BRANTFORD, Oct. 1st, 1886. W. C. CORSON, M.D.

(Postscript to Physician's Report.)

P. S.—Since forwarding to you the above report, it becomes my duty to inform you that diphtheria has made its unexpected appearance in the Institution, first in the person of a male pupil, aged about 14 years, in whom it early assumed a malignant and fatal type. Five other cases of the same malady followed in quick succession, but less virulent in form. As this outbreak of an infectious disease occurred after the close of the official year, the full history of its origin, course and termination, belongs properly to the next annual report, to which I beg to defer it.

The Principal, however, has kindly shown me his supplementary report respecting this event, in which the main facts are faithfully exhibited, and the statements and conclusions therein contained meet with my unqualified approval.

W. C. C.

BRANTFORD, Nov. 1st, 1886.

REPORT

OF

THE HON. THE PROVINCIAL SECRETARY

ON THE WORKING OF THE

TAVERN AND SHOP LICENSES ACTS

FOR THE YEAR

1886.

Printed by Order of the Legislative Assembly.

Toronto:
PRINTED BY WARWICK & SONS, 26 AND 28 FRONT STREET WEST
1887.

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LICENSE REPORT.

PROVINCIAL SECRETARY'S OFFICE,
LICENSE BRANCH,
TORONTO, January, 1887.

To the Honourable JOHN BEVERLEY ROBINSON,
Lieutenant-Governor of the Province of Ontario:

MAY IT PLEASE YOUR HONOUR:

I have the honour to submit the Eleventh Annual Report, and accompanying Schedules, respecting the operation of the Liquor License Laws.

NUMBER OF LICENSES.

Schedule A is a comparative statement of the number of Licenses of the various denominations issued, and of the number extended, transferred or removed, in each of the License Districts of the Province, during the past three license years, and may be thus summarized:

YEARS.	LICENSES.									EXTENSIONS, TRANSFERS, AND REMOVALS OF LICENSES.			
	TAVERN.				SHOP.	WHOLESALE.	VESSEL.		TOTAL.	EXTENSIONS.	TRANSFERS.	REMOVALS.	TOTAL.
	YEARLY.		SIX MONTHS.										
	Ordinary.	Beer and Wine.	Ordinary.	Beer and Wine.			Ordinary.	Beer and Wine.					
1883-4	3340	23	27	5	781	36	18	3	4233	72	589	46	707
1884-5	3230	23	26	1	676	28	12	2	3997	48	427	44	519
1885-6	2561	24	34*	1	525	24	8		3177	43	361	28	432

There was a decrease in the number of Licenses issued last year, as compared with the preceding year, of 660 Tavern, 150 Shop, 4 Wholesale, and 6 Vessel, or 820 in all.

PROVINCIAL REVENUE.

The same Schedule shews the revenue derived by the Province from Licenses and Fines to have been, for

1883-4	$ 93,225 70
1884-5	192,867 02
1885-6	165,285 62

The reduction in the number of licenses issued and the decrease in the revenue have been caused by the introduction of the Canada Temperance Act in the Counties of Bruce, Dufferin, Dundas, Glengarry, Huron, Norfolk, Oxford, Renfrew, Simcoe and Stormont.

LICENSES IN COUNTIES AND CITIES.

Schedule B is a statement of the number of Licenses issued in the several Counties and Cities during the past twelve years, the aggregates of the last three years agreeing with those of Schedule A, except as to Six Months' Licenses, which are not included in the present Schedule.

LICENSES IN MINOR MUNICIPALITIES.

Schedule C gives, in detail, as regards each City, Town, Incorporated Village, and Township, and the Unorganized Territory, of the Province, the number of licenses (other than vessel licenses) and of extensions, transfers and removals, granted during the past three years.

TOTAL COLLECTIONS.

This Schedule also gives the amounts collected from Provincial licenses and fines (including the sums imposed by municipal by-laws), the totals of which (with the duties derived from Vessel Licenses), were as follows :—

1883-4	$444,745 40
1884-5	540,299 24
1885-6	451,072 97

MUNICIPAL REVENUE.

The payments in the Municipalities are shewn by the same Schedule to have been, in—

1883-4	$287,246 31
1884-5	283,589 80
1885-6	231,433 91

the decrease being attributable to the reduction, already referred to, in the number of licenses.

FINES.

The Fines collected during the past year, as shewn in Schedule D, amounted to $18,717.74, as compared with $21,406.32 in 1883-4, and $18,826.30 in 1884-5.

Salaries of Inspectors—Expenses of Commissioners.

The payments during the past year under these heads are set out in the same Schedule, and shew a decrease of $10,075.19 as compared with the preceding License year; the reduction having been caused by the dropping out of a number of License Inspectors at the close of the License year 1884-5, owing to the coming into force of The Canada Temperance Act, 1878, in their respective Counties.

Commitments for Drunkenness.

Schedule E shews the number of prisoners committed for drunkenness during the years from 1876 to 1886 inclusively. The number for the past year is somewhat less than that of the preceding year.

The Canada Temperance Act, 1878.

In Schedule F is set out the result of the voting on the Scott Act, in the several Counties and Cities in which it has been submitted since the month of February, 1884, in which is given the particulars of the voting where the Act has been submitted up to the present time.

The Act is now in force in the following Counties and Cities:—

Counties.

Brant (except the City of Brantford)
Bruce.
Carleton.
Dufferin.
Elgin.
Frontenac.
Halton.
Huron.
Kent.
Lambton.
Lanark.
Leeds and Grenville.
Lennox and Addington.
Lincoln (except the City of St. Catharines).
Middlesex.
Muskoka and Parry Sound (those portions comprised in the Counties of Simcoe and Victoria respectively)
Norfolk.
Northumberland and Durham
Ontario.
Oxford.
Peterborough.

Renfrew.
Simcoe.
Stormont, Dundas and Glengarry.
Victoria.
Wellington.

CITIES.

Guelph.
St. Thomas.

THE INSPECTORS OF LICENSES.

The names and post-office addresses of the Inspectors of Licenses are set out in Schedule G.

SPECIAL INSPECTION OF LICENSE DISTRICTS.

The special inspections of the License Districts, and the examination of the work of the license officials therein, from time to time, have been continued during the past year.

Respectfully submitted,

ARTHUR S. HARDY,
Provincial Secretary.

SCHEDULES.

SCHEDULE A.

COMPARATIVE STATEMENT, BY LICENSE DISTRICTS, shewing the number of (Provincial) such Licenses extended, transferred or removed, and the amount of Revenue received 1884-5, and 1885-6 respectively.

LICENSE DISTRICT.	Tavern Licenses Issued.												Tavern Licenses Extended.			Shop Licenses Issued.			Shop Licenses Extended.		
	Yearly Licenses.						Six Months' Licenses.														
	Ordinary.			Beer and Wine.			Ordinary.			Beer and Wine.											
	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.
Addington	43	44	41	..	..	1	..	..	..	..	..	..	1	....	....	4	3	2	....	....	....
Algoma	23	23	24	..	..	..	..	..	..	..	..	..	....	....	....	3	3	3	....	....	....
Brant, North	20	19	17	..	..	..	..	..	..	..	..	..	....	....	....	2	2	2	....	....	....
Brant, South	38	30	26	..	..	1	..	..	..	..	..	..	2	1	3	9	5	5	....	....	....
Brockville and South Leeds	58	52	53	..	..	..	..	2	1	..	..	..	3	2	....	16	13	13	....	2	1
Bruce, North	42	38	....	..	..	..	1	1	..	..	..	..	....	2	....	7	5	....	....	1	....
Bruce, South	66	61	....	..	..	..	..	..	..	..	..	..	....	....	....	9	10	....	....	....	....
Cardwell	42	39	22	..	..	..	2	..	..	..	..	..	....	....	....	5	3	1	....	....	....
Carleton	40	40	39	..	..	1	..	..	..	..	..	..	....	....	1	....	1	....	....	....	....
Cornwall	22	24	....	..	..	..	..	..	..	..	..	..	....	....	....	6	5	....	....	....	....
Dufferin	34	34	....	..	..	..	..	..	..	..	..	..	....	....	....	5	4	....	....	....	....
Dundas	23	23	....	..	..	..	..	..	..	..	..	..	....	....	....	1	2	....	....	....	....
Durham, East	31	30	27	..	..	..	..	..	..	..	..	..	2	....	....	8	6	5	....	....	....
Durham, West	19	19	18	..	..	..	..	..	1	..	..	..	....	....	....	3	3	3	....	....	....
Elgin, East	52	51	47	..	..	2	..	..	..	..	..	..	....	....	....	12	10	8	....	....	....
Elgin, West	22	23	22	..	..	..	1	1	1	..	..	..	1	....	....	4	2	2	....	....	....
Essex, North	50	47	54	..	..	..	1	..	..	..	..	..	....	....	....	14	11	11	....	....	....
Essex, South	24	23	23	..	..	..	1	..	1	..	..	..	....	....	1	5	4	2	....	....	....
Frontenac	19	16	17	..	..	1	..	..	..	..	..	..	....	....	....	....	....	....	....	....	....
Glengarry	29	31	....	..	..	..	..	..	..	..	..	..	....	....	....	8	7	....	....	....	....
Grey, East	34	36	36	..	..	..	..	..	..	..	..	..	....	....	....	3	2	2	....	....	....
Grey, North	33	30	30	..	..	..	..	..	..	..	..	..	....	....	....	10	10	10	....	....	....
Grey, South	28	25	25	..	..	1	..	..	..	..	..	..	....	....	....	7	7	6	....	....	....
Haldimand	42	37	37	..	..	1	..	..	..	..	..	..	....	....	....	3	3	2	....	....	1
Hamilton	103	96	108	2	1	2	..	..	..	2	..	1	1	1	....	54	47	48	3	1	....
Hastings, East	30	32	31	..	..	..	..	..	..	..	..	..	1	....	....	3	2	2	....	....	....
Hastings, North	26	27	27	..	..	..	..	..	..	..	..	..	....	....	....	6	6	7	....	....	....
Hastings, West	41	40	40	..	..	..	1	1	2	..	..	..	3	....	....	6	7	8	1	....	....
Huron, East	34	29	....	..	..	..	..	..	..	..	..	..	1	1	....	1	1	....	....	....	....
Huron, South	45	42	....	..	..	..	..	..	..	..	..	..	....	....	....	6	6	....	....	....	....
Huron, West	45	44	....	..	..	..	1	1	..	..	..	..	1	1	....	8	7	....	....	....	....
Kent, East	42	45	41	..	..	..	..	..	..	..	..	..	....	1	....	7	4	4	....	1	....
Kent, West	28	30	30	..	..	..	..	..	..	1	..	..	....	....	....	7	7	4	....	....	1
Kingston	52	38	37	1	1	1	..	..	..	..	..	..	....	1	2	23	20	22	....	1	....
Lambton, East	29	28	26	..	..	1	..	..	..	..	..	..	....	....	....	7	6	5	....	....	....
Lambton, West	43	46	42	1	..	1	..	..	1	..	..	..	....	....	....	12	10	5	....	....	....
Lanark, North	16	18	19	..	..	..	..	..	..	..	..	..	....	....	....	2	2	2	....	....	....
Lanark, South	19	18	18	..	..	..	..	..	..	..	..	..	....	....	....	5	5	4	....	....	....
Leeds & Grenville, N. & South Grenville	36	36	35	..	..	..	1	..	..	..	..	..	....	....	....	5	4	4	....	....	....
Lennox	19	18	17	..	..	..	..	1	1	..	..	..	....	....	....	4	4	4	....	....	....
Lincoln	65	65	60	..	..	..	4	3	4	..	..	..	1	....	....	13	11	10	....	1	1
London	47	48	49	..	..	..	..	..	..	..	..	..	....	....	....	24	22	22	1	....	....
Middlesex, East	67	65	66	..	..	..	..	..	..	..	..	..	....	....	....	7	6	6	....	....	....
Middlesex, North	30	27	29	..	..	..	..	..	..	..	..	..	....	....	....	6	5	5	....	....	....

* Wholesale license extended.

† And one wholesale license extended in each case.

SCHEDULE A.

Tavern, Shop, Wholesale, Six Months' and Vessel Licenses issued, and the number of by the Province therefrom, including the proportion of Fines, in the license years 1883-4.

Wholesale Licenses Issued.			Vessel Licenses Issued. Ordinary.			Vessel Licenses Issued. Beer and Wine.			Licenses Transferred and Removed. Transfers.			Licenses Transferred and Removed. Removals.			Totals.			Proportion of Duties for Provincial Licenses, Fees for Transfers and Removals, and Fines, received by the Province.			Remarks.
1883-4	1884-5	1885-6	1883-4	1884-5	1885-6	1883-4	1884-5	1885-6	1883-4	1884-5	1885-6	1883-4	1884-5	1885-6	1883-4	1884-5	1885-6	1883-4	1884-5	1885-6	
									7	8	4	1	..	1	57	55	49	$ c. 759 32	$ c. 1414 39	$ c. 1207 67	
									1	1	2				26	27	29	642 83	1001 07	931 65	
									3	3	1				25	24	20	383 67	759 32	706 32	
1	*	*1							3	2	2			1	53	39	41	1223 91	2476 26	2378 30	
									6	5	4				83	76	72	1612 17	3830 07	2601 62	[force.
									2	....	....				52	47	....	810 03	1518 58	....	C. T. Act in
									21	7	....				96	78	....	1524 31	2650 89	....	do
									8	4	3			1	57	47	26	777 39	1194 63	608 21	
	..								5	4	4	..		1	46	46	45	737 83	1201 52	1140 38	[force.
		....							5	3	....			1	33	33	....	586 89	1236 42	....	C. T. Act in
									12	3	....			....	51	41	....	746 16	1373 90	....	do
									2	....	....	1	....	....	27	25	....	331 91	731 45	....	do
					1				6	5	5	..	1	..	48	42	37	867 18	1510 71	1401 51	
					....				5	4	2				28	26	24	330 12	773 86	750 91	
	..								9	3	3	..	1	..	73	65	60	1729 86	3703 26	3429 80	
									7	4	2	..	..	..	35	30	27	387 08	705 25	671 69	
	1								8	4	3	..	..	..	75	63	68	1468 74	2607 62	2667 77	
									3	4	6				33	31	33	564 38	1081 24	1046 67	
									2	....	2	..	..	..	21	16	20	217 57	401 12	462 17	
..	..	..							5	6	..	..	2	..	42	46	..	609 89	1151 39	..	[force. C. T. Act in
									6	3	6	..	..	1	43	41	45	601 00	1099 34	1055 16	
		....	3	1	..				6	2	2	..	..	..	49	43	42	1201 34	1901 81	1791 91	
									5	2	3	..	..	..	40	34	35	631 78	1054 67	1045 20	
									6	4	1	..	..	1	51	45	42	751 54	1476 37	1228 71	
8	14	3							28	10	32	5	4	5	206	162	199	5710 54	13000 58	14650 98	
									5	1	3	1	..	..	40	35	36	519 53	920 41	930 93	
							..	..	5	6	3	2	1	..	39	40	37	597 72	980 78	1042 40	
3	3	3					..	..	10	7	7	..	..	1	65	59	60	1356 52	3754 17	3936 60	
..									13	7	..		1	..	50	38	....	545 74	877 59		[force. C. T. Act in
									8	5	....		1	1	60	54	..	957 15	1762 90		do
									10	4	..		..	..	65	57	..	1203 97	2183 29		do
									10	10	5		..	..	57	61	50	942 82	2407 00	1829 97	
									7	5	4		..	..	44	42	39	724 09	1670 98	1474 07	
3	12	1	5	5	4	..	..	1	7	4	1	..	..	1	92	74	69	3154 76	6305 52	6849 89	
		....							13	7	2	..	..	1	50	41	35	670 00	1443 18	1044 67	
1	1						..	..	5	6	9	..	2	..	62	65	68	1244 18	2589 61	2410 37	
									3	2	1	..	..	..	24	22	22	466 37	861 77	886 42	
									4	3	..	..	..	..	28	26	22	462 59	1031 60	909 31	
									3	2	1	..	..	..	44	42	41	764 04	1479 56	1482 56	
									7	2	3	1	1	..	31	26	25	436 81	860 10	805 23	
		....							13	12	9	2	1	..	97	93	84	1892 14	[illegible]	1711 96	
2	2	1							5	6	13	2	..	2	84	78	80	[illegible]	[illegible]	[illegible]	
		....							15	....	7	..	..	..	89	71	79	1599 99	2390 67	2490 10	
		....							2	4	..	1	1	..	39	37	39	[illegible]	[illegible]	1027 63	

SCHEDULE A.—Comparative Statement shewing the Number of (Provincial)

LICENSE DISTRICT.	Tavern Licenses Issued.												Tavern Licenses Extended.			Shop Licenses Issued.			Shop Licenses Extended.		
	Yearly Licenses.						Six Months' Licenses.														
	Ordinary.			Beer and Wine.			Ordinary.			Beer and Wine.											
	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.
Middlesex West	33	34	30			3							2		1	5	6	5			
Monck	19	18	12		1	4	1	1	1							3	2	1			
Muskoka and Parry Sound	47	43	35	2	5	2	2	2			1			1	1 B. & W.	6	4	1		1	
Nipissing	8	5	23	1												5	5	5			
Norfolk, North	29	26		1	1											5	4				
Norfolk, South	22	20		2	4								3			1					
Northumberland, East	27	28	25					1	1				1			9	7	6	1	1	1
Northumberland, West	27	24	27						1				1	3		3	3	3	1		
Ontario, North	42	39	40	1	2	1										9	8	9			
Ontario, South	28	27	26	1												3	3	3			
Ottawa	75	75	75				1	1	1							84	78	77			1
Oxford, North	37	31														4	4				
Oxford, South	35	31											3	3		5	4		1		
Peel	36	36	36				1	1	1							4	3	3			
Perth, North	67	61	61													12	9	9			
Perth, South	42	41	32													5	5	5			
Peterborough, East	22	21	18					1							2	4	4	4			
Peterborough, West	28	25	25				1		1							10	9	8			
Prescott	43	43	44				2									7	4	3			
Prince Edward	23	21	23				1	1	4					1		4	1	2			
Renfrew, North	27	24														13	11				
Renfrew, South	32	18		4	2									2		17	9			1	
Russell	37	38	37																		
Simcoe, East	38	38			1								4			5	5				
Simcoe, South	35	30														5	5				
Simcoe, West	53	49						1								13	12				
Stormont	15	14														2	1				
Thunder Bay	32			1												4					
Thunder Bay, East		45	25		1		1							3	10		9	7		1	
Thunder Bay, West		4	9		1			1							1			2			1
Toronto	197	217	224										11	1	3	98	88	71	4		
Victoria, North, and Haliburton	34	32	29	1			1		1					1	1						
Victoria, South	27	26	25					1		1			1			3	5	3			
Waterloo, North	47	47	46										1	1		7	8	8			
Waterloo, South	43	43	44	1	2										2	8	6	5			1
Welland	74	78	76	2	1		8	7	9				4	1	4	18	14	15	2		1
Wellington, Centre	35	35	26												1	4	4	2	1		
Wellington, South	36	36	35	1												8	8	7			
Wellington, West	53	45	42	1		1										10	7	4			
Wentworth, North	30	30	30													4	4	4			
Wentworth, South	22	24	24										1			2	2	2			
York, East	43	37	28													7	2	2			
York, North	45	43	44											1		7	7	4			
York, West	44	41	42													9	6	6			
Totals	3340	3230	2561	23	23	24	27	26	34	5	1	1	50	28	33	781	675	525	22	16	10

Tavern, Shop, Wholesale, Six Months' and Vessel Licenses, etc.—*Continued.*

Wholesale Licenses Issued.			Vessel Licenses Issued.						Licenses Transferred and Removed.						Totals.			Proportion of Duties for Provincial Licenses, Fees for Transfers and Removals, and Fines, received by the Province.			Remarks.
			Ordinary.			Beer and Wine.			Transfers.			Removals.									
1st Class.	2nd Class.	3rd Class.	1st Class.	2nd Class.	3rd Class.	1st Class.	2nd Class.	3rd Class.	1st Class.	2nd Class.	3rd Class.	1st Class.	2nd Class.	3rd Class.	1st Class.	2nd Class.	3rd Class.	1st Class.	2nd Class.	3rd Class.	
																		$ c.	$ c.	$ c.	
									12	6	1			1	52	46	41	746 87	1507 09	1318 44	
									3						26	22	18	304 16	577 65	388 27	
									5	9	15				63	65	54	1290 97	1900 48	1695 83	
									3	2	4				17	12	32	914 95	350 61	1035 47	[force.
									9	1					44	32		657 25	1077 21		C. T. Act in
									5	4					30	28		350 45	585 20		do
									5	6	4		1	1	43	44	38	594 44	1194 59	1055 60	
									2		2				34	30	33	608 85	1076 50	1268 69	
									14	11	7	7	3	1	73	63	58	826 50	1423 32	1531 57	
									10	7	5				42	37	34	645 78	1264 75	1225 40	
			1	1					19	10	21	6	5	6	186	170	181	5120 41	14209 52	14028 45	[force.
									4	1					45	36		845 56	1377 52		C. T. Act in
									4	4					48	42		724 78	1585 56		do
									6	5	6		2	1	47	47	47	694 21	1424 85	1292 20	
									12	16	8	3	1	1	94	87	79	1709 21	3047 60	3944 73	
									2	6	3				49	52	40	911 08	1835 30	1552 87	
									3	1	3		1		29	30	28	361 05	710 86	655 00	
			1	1					6	2	2				46	37	36	940 16	1734 37	1691 50	
									5	5	9				53	52	58	887 91	1426 10	1538 35	
			2	2	2				5	3	6	1			36	29	37	641 70	1073 56	1230 67	[force.
															40	35		888 50	1352 20		C. T. Act in
									3						56	32		902 80	917 57		do
									5	2	4	1		1	42	40	42	623 53	1082 10	1078 86	
									10	1			1		57	46		784 42	1383 95		do
									4	1					44	36		649 25	1040 50		do
									7	8					73	70		1255 07	2541 50		do
									4	1					21	16		172 37	278 08		do
1									13			1			55			939 75			
	2	1								25	11		2	2		89	57		2194 71	2038 96	
										4	2		1	1		10	17		175 42	373 01	
14	16	14	4	2	2	1	1		23	40	39	2	2		370	370	356	10004 74	22921 51	29023 79	
									1	4			1		30	38	31	356 50	642 22	798 85	
			1			1			7	3					39	33	28	792 [illegible]	1419 48	1404 [illegible]	
1									7	3	1				63	59	55	1129 45	2122 22	2133 48	
															52	50	52	1000 [illegible]	1891 15	1846 81	
									10	17	12	4	3		128	121	117	1992 90	3899 18	4047 54	
									6	4	4				46	43	33	822 64	1231 20	886 48	
									7		4				52	44	46	1128 50	2815 73	2644 47	
									7	9	4		1		73	63	51	1290 06	1873 99	1937 79	
									4	4	2		1		38	29	26	591 03	1280 09	1252 15	
									3	1	6				28	27	32	397 04	684 86	675 37	
									7	1	3				57	40	38	944 40	1390 90	797 87	
									6	6	4				58	53	43	936 67	1647 57	1714 36	
									5	7	7	1	1	1	60	56	46	884 60	1497 32	1536 18	
36	28	24	18	12	8	3	2		589	427	361	46	44	28	1940	1746	1566	93225 70	192867 02	165285 62	

* Dominion Issue.

† And beer extended.

SCHEDULE B.

COMPARATIVE STATEMENT, by COUNTIES AND CITIES, showing the number of (Provincial) Tavern, Shop, Wholesale and Vessel Licenses issued in the several Counties of the Province, and in the Cities separated from Counties, for the license years 1874-5-6-7-8-9-80-1-2-3-4-5.

COUNTY.	Year.	Tavern Licenses.	Shop Licenses.	Wholesale Licenses.	Vessel Licenses.	REMARKS.
Algoma (including Thunder Bay)	1874	30	14	.....	3	
	1875	36	15	.....	3	
	1876	18	6			
	1877	19	5			
	1878	19	5			
	1879	21	8	1		
	1880	22	6	1		
	1881	29	9	1		
	1882	35	9	1		
	1883	56	6	1		
	1884	74	12	2		
	1885	58	12	1		
Brant	1874	95	29			
	1875	73	22	2		
	1876	56	14	4		
	1877	.....	.....	7	.....	Dunkin Act in force.
	1878	53	11	5		
	1879	55	14	1		
	1880	57	14	1		
	1881	55	14	1		
	1882	59	13	1		
	1883	58	11	1		
	1884	49	7	.....		
	1885	44	7	1		
Bruce	1874	180	25			
	1875	119	22			
	1876	88	13	3		
	1877	83	12	2		
	1878	83	9	2	.....	Dunkin Act in force for 10 months.
	1879	93	12			
	1880	98	14			
	1881	105	15			
	1882	109	18			
	1883	108	16			
	1884	99	15			
	1885	.....	.....	.....	.....	Can. Temp. Act in force.
Carleton (not including Ottawa)	1874	89	5			
	1875	79	8			
	1876	44	1	2		
	1877	55	3			
	1878	43	3			
	1879	43	1			
	1880	42	3			
	1881	50	3			
	1882	54	1			
	1883	58	9			
	1884	58	1			
	1885	55	.....			
Dufferin	1881	33	7	.....	.....	New County erected 24th January, 1881.
	1882	33	5			
	1883	34	5			
	1884	34	4			
	1885	.....	.....	.....	.....	Can. Temp. Act in force.

SCHEDULE B.—Comparative Statement, etc.—*Continued.*

COUNTY.	Year.	Tavern Licenses.	Shop Licenses.	Wholesale Licenses.	Vessel Licenses.	REMARKS.
Elgin	1874	113	25			
	1875	110	24			
	1876	66	16	2		
	1877	66	10			
	1878	69	12			
	1879	72	16			
	1880	74	12			
	1881	74	13			
	1882	74	13			
	1883	74	16			
	1884	74	12			
	1885	71	10			
Essex	1874	120	28	6		
	1875	101	25	6		
	1876	62	14	5	1	
	1877	69	18	1	1	
	1878	69	18	2	1	
	1879	71	18	3	1	
	1880	70	19	2	1	
	1881	74	21	2		
	1882	71	20	2		
	1883	74	19	2		
	1884	70	15	1		
	1885	77	13			
Frontenac (not including Kingston)	1874	71	2			
	1875	57	29			
	1876	29		1		
	1877	17				Dunkin Act assumed to be in force until quashed, December 28.
	1878	34				
	1879	36				
	1880	33	1			
	1881	33	1			
	1882	33	2			
	1883	36	2			
	1884	34	2			
	1885	34	1			
Grey	1874	115	20		3	
	1875	114	16		2	
	1876	77	11	5	2	
	1877			6	2	Dunkin Act in force.
	1878	72	7	4	1	Do until Sept.
	1879	91	12	1	1	
	1880	88	17	1	2	
	1881	84	16		1	Melancthon and Sheffield [illegible]
	1882	88	18		1	[illegible] County of Dufferin.
	1883	95	20		3	
	1884	91	19		1	
	1885	92	18			
Haldimand	1874	96	16			
	1875	83	13			
	1876	45	5			
	1877	49	4			
	1878	49	4			
	1879	50	5			
	1880	47	5			
	1881	51	5			
	1882	52	5			
	1883	51	5			
	1884	47	5			
	1885	47	3			
Haliburton						See Victoria, post.

SCHEDULE B.—Comparative Statement, etc.—*Continued.*

COUNTY.	Year.	Tavern Licenses.	Shop Licenses.	Wholesale Licenses.	Vessel Licenses.	REMARKS.
Halton	1874	61	4			
	1875	58	5			
	1876	39	2	1		
	1877	38	1			
	1878	38	1			
	1879	42	1			
	1880	41	1			
	1881	41	1			
	1882					Can. Temp. Act in force.
	1883					do
	1884					do
	1885					do
Hastings	1874	117	23	1		
	1875	100	21	2		
	1876	76	11	3	1	
	1877	82	14	3	1	
	1878	89	15	3	2	
	1879	94	15	3	1	
	1880	91	16	3		
	1881	90	15	3		
	1882	95	13	3		
	1883	97	15	3		
	1884	99	15	3		
	1885	98	17	3		
Huron	1874	150	38			
	1875	164	37	2		
	1876	113	16	3		
	1877	124	16			
	1878	127	20			
	1879	134	21			
	1880	131	16			
	1881	128	15			
	1882	124	15			
	1883	124	15			
	1884	111	14			
	1885					Can. Temp. Act in force.
Kent	1874	128	41		1	
	1875	118	34		1	
	1876	66	13	4	1	
	1877	67	15		1	
	1878	65	13			
	1879	67	14			
	1880	67	13			
	1881	69	13		1	
	1882	69	14		1	
	1883	70	14			
	1884	75	11			
	1885	71	8			
Lambton	1874	89	44	1		
	1875	85	33			
	1876	65	28	1		
	1877	65	25			
	1878	70	27			
	1879	72	26			
	1880	71	25			
	1881	72	22			
	1882	75	22			
	1883	73	19	1		
	1884	74	16	1		
	1885	70	10			

SCHEDULE B.—Comparative Statement, etc.—*Continued.*

COUNTY.	Year.	Tavern Licenses.	Shop Licenses.	Wholesale Licenses.	Vessel Licenses.	REMARKS.
Lanark	1874	62	20	2		
	1875	62	14	1		
	1876	32	9	2		
	1877	32	9			
	1878	7	4			Dunkin Act in force, except in Perth.
	1879	33	6			
	1880	34	8			
	1881	36	6			
	1882	36	7			
	1883	35	7			
	1884	36	7			
	1885	37	6			
Leeds and Grenville	1874	145	32	1		
	1875	136	23	1		
	1876	79	23	3		
	1877	101	25			
	1878	97	19			
	1879	97	18			
	1880	97	20	1		
	1881	89	18			
	1882	92	21			
	1883	94	21			
	1884	88	17			
	1885	87	17			
Lennox and Addington	1874	52	7			
	1875	46	8		1	
	1876	28	6	1		
	1877			1		Dunkin Act in force.
	1878	36	6			
	1879	37	5			
	1880	57	5			
	1881	41	5			
	1882	43	6			
	1883	45	6			
	1884	44	5			
	1885	42	5			
Lincoln	1874	94	23			
	1875	103	37			
	1876	70	31			
	1877	70	25			
	1878	69	21			
	1879	72	16			
	1880	73	12			
	1881	69	14			
	1882	73	15			
	1883	72	13			
	1884	71	11			
	1885	64	10			
Middlesex (not including London)	1874	188	17	1		
	1875	174	33			
	1876	122	26	3		
	1877	139	23			
	1878	142	21			
	1879	141	19			
	1880	134	18			
	1881	148	18			
	1882	126	16			
	1883	130	18			
	1884	126	17			
	1885	128	16		1	

SCHEDULE B.—Comparative Statement, etc.—*Continued.*

COUNTY.	Year.	Tavern Licenses.	Shop Licenses.	Wholesale Licenses.	Vessel Licenses.	REMARKS.
Muskoka & Parry Sound.	1874	9				
	1875	23				
	1876	19				
	1877	22				
	1878	29				
	1879	38	1			
	1880	44	4			
	1881	45	4			
	1882	48	5			
	1883	49	6			
	1884	48	4			
	1885	37	1			
Nipissing	1878	2	1			
	1879	3	1			
	1880	3	1			
	1881	11	8			
	1882	8	5			
	1883	9	5			
	1884	5	5			
	1885	23	6			
Norfolk	1874	73	6			
	1875	74	6			
	1876	51	4	2		
	1877	51	5	1		
	1878	55	5			
	1879	51	7			
	1880	51	6			
	1881	55	6			
	1882	56	6			
	1883	54	6			
	1884	51	4			
	1885	.....	.....	.....	.....	Can. Temp. Act in force.
Northumberland and Durham	1874	135	35	2	1	
	1875	121	32	2	1	
	1876	102	27	4	1	
	1877	103	25	2	1	
	1878	89	21	2	2	Dunkin Act in force for 10 months, except in Port Hope and Cobourg.
	1879	98	21	.....	1	
	1880	100	22	.....	1	
	1881	100	23	.....	1	
	1882	102	23	.....	1	
	1883	104	23	.....	1	
	1884	101	19			
	1885	97	16			
Ontario	1874	86	35			
	1875	87	23			
	1876	60	10			
	1877	58	9			
	1878	55	8	2	.....	Dunkin Act in force for 10 months.
	1879	61	9			
	1880	65	11			
	1881	66	12			
	1882	71	13			
	1883	72	12			
	1884	68	11			
	1885	67	12			

SCHEDULE B.—Comparative Statement, etc.—*Continued.*

COUNTY.	Year.	Tavern Licenses.	Shop Licenses.	Wholesale Licenses.	Vessel Licenses.	REMARKS.
Oxford	1874	104	29			
	1875	102	25			
	1876	73	9	4		
	1877	70	10	1		
	1878	71	10			
	1879	74	12			
	1880	74	14			
	1881	73	13			
	1882	74	11			
	1883	72	9			
	1884	62	8			
	1885	.....	.....	.....	.....	Can. Temp. Act in force.
Peel	1874	91	15			
	1875	86	15			
	1876	49	10			
	1877	57	9			
	1878	60	8			
	1879	57	7			
	1880	62	7			
	1881	56	7			
	1882	57	6			
	1873	57	5			
	1884	55	4			
	1885	58	4			
Perth	1874	145	33			
	1875	135	25			
	1876	101	13	3		
	1877	105	17			
	1878	105	17			
	1879	110	18			
	1880	110	19			
	1881	106	19			
	1882	110	19			
	1883	109	17			
	1884	102	14			
	1885	93	14			
Peterborough	1874	98	16			
	1875	72	16			
	1876	40	11	2	1	
	1877	43	11		1	
	1878	35	11		1	Dunkin Act in force, in part of West Riding, for 10 months.
	1879	42	13		1	
	1880	46	12		1	
	1881	46	14		1	
	1882	50	15		1	
	1883	50	14		1	
	1884	46	13		1	
	1885	43	12			
Prescott and Russell	1874	63	10			
	1875	68	11	1		
	1876	52				
	1877	46	5			
	1878	49	6			
	1879	41	5			
	1880	42	4			
	1881	50	5			
	1882	58	6			
	1883	67	7			
	1884	65	4			
	1885	65	3			

SCHEDULE B.—Comparative Statement, etc.—*Continued.*

COUNTY.	Year.	Tavern Licenses.	Shop Licenses.	Wholesale Licenses.	Vessel Licenses.	REMARKS.
Prince Edward	1874	22	3	.....	3	
	1875	23	3	.....	1	
	1876	.....	.....	1	1	Dunkin Act in force.
	1877	.....	.....	.....	.....	do
	1878	.....	.....	.....	.....	do
	1879	23	2	.....	1	
	1880	24	2	.....	3	
	1881	24	3	.....	1	
	1882	22	3	.....	2	
	1883	23	4	.....	2	
	1884	21	1	.....	2	
	1885	23	2	.....	2	
Renfrew	1874	100	35	.....	1	
	1875	102	30	1	1	
	1876	51	20	.....	1	
	1877	42	17			
	1878	31	15			
	1879	36	16			
	1880	42	21			
	1881	47	17			
	1882	48	23			
	1883	63	30			
	1884	44	20			
	1885	.....	.....	.....	.....	Can. Temp. Act in force.
Simcoe	1874	223	42			
	1875	196	35	2	2	
	1876	135	24	2	2	
	1877	137	24	1	2	
	1878	149	21	1	1	
	1879	142	20	1	1	
	1880	155	23	1	1	
	1881	144	23	1	1	Mono and Mulmur attached to new County of Dufferin.
	1882	146	23	1		
	1883	147	26			
	1884	138	24			
	1885	.....	.....	.....	.....	Can. Temp. Act in force.
Stormont, Dundas and Glengarry	1874	122	31			
	1875	80	28			
	1876	82	22			
	1877	87	17			
	1878	94	17			
	1879	91	16			
	1880	91	18			
	1881	96	18			
	1882	95	18			
	1883	89	17			
	1884	92	15			
	1885	.....	.....	.....	.....	Can. Temp. Act in force.
Victoria	1874	78	13	1		
	1875	70	9	.....	1	
	1876	55	5	1	.....	
	1877	56	5	.....	.....	
	1878	56	6	.....	.....	
	1879	60	6	.....	.....	
	1880	59	5	.....	.....	Including Haliburton.
	1881	62	4	.....	.....	
	1882	62	3	.....	1	
	1883	62	3	.....	2	
	1884	58	3	.....	.....	
	1885	54	3	.....	.....	

SCHEDULE B.—Comparative Statement. etc.—*Continued.*

COUNTY.	Year.	Tavern Licenses.	Shop Licenses.	Wholesale Licenses.	Vessel Licenses.	REMARKS.
Waterloo	1874	135	21	3		
	1875	136	20	13		
	1876	86	19	10		
	1877	84	17			
	1878	87	17			
	1879	89	15			
	1880	87	15			
	1881	88	16			
	1882	90	17			
	1883	91	15		1	
	1884	92	14			
	1885	90	13			
Welland	1874	145	28	3		
	1875	151	23			
	1876	73	19			
	1877	80	19			
	1878	89	21			
	1879	92	25			
	1880	87	29			
	1881	81	19			
	1882	78	20			
	1883	79	18			
	1884	82	14			
	1885	78	15			
Wellington	1874	183	52			
	1875	182	41	3		
	1876	138	29	3		
	1877	130	28	3		
	1878	134	29			
	1879	138	29			
	1880	145	30			
	1881	134	24			Orangeville, Amaranth and East Garafraxa attached to new C. [illegible] of Dufferin.
	1882	128	26			
	1883	120	22			
	1884	116	19			
	1885	104	13			
Wentworth (not including Hamilton)	1874	110	32	4		
	1875	107	19	2		
	1876	61	11	2		
	1877	[illegible]	10			
	1878	[illegible]	[illegible]			
	1879	[illegible]	[illegible]			
	1880	[illegible]	6			
	1881	[illegible]	[illegible]			
	1882	51	[illegible]			
	1883	[illegible]	[illegible]			
	1884	[illegible]	[illegible]			
	1885	[illegible]	6			
York (not including Toronto)	1874	148	39			
	1875	164	35			
	1876	108	16	1		
	1877	97	15			
	1878					Dunkin Act in force [illegible] one month May 1.
	1879	114	[illegible]			
	1880	[illegible]	[illegible]			
	1881	[illegible]	21			
	1882	[illegible]	[illegible]			
	1883	[illegible]	23			
	1884	121	[illegible]			
	1885	114	[illegible]			

SCHEDULE B.—Comparative Statement, etc.—*Continued.*

CITY.	Year.	Tavern Licenses.	Shop Licenses.	Wholesale Licenses.	Vessel Licenses.	REMARKS.
Toronto	1874	309	184	21	16	
	1875	299	128	28	9	
	1876	215	100	39	9	
	1877	182	100	26	6	
	1878	181	92	20	10	
	1879	195	98	19	6	
	1880	204	94	18	4	
	1881	210	95	15	6	
	1882	216	100	14	7	
	1883	197	98	14	5	
	1884	217	88	13	3	
	1885	227	71	14*	2*	
Hamilton	1874	127	93	.....	3	
	1875	110	72			
	1876	68	61	11	1	
	1877	68	55	7	2	
	1878	68	64	7	2	
	1879	68	61	8		
	1880	74	57	7		
	1881	89	55	7		
	1882	98	58	8		
	1883	105	54	8		
	1884	97	47	4		
	1885	110	48	3		
Ottawa	1874	120	77	6		
	1875	114	148	7		
	1876	75	77	7	1	
	1877	75	80	2	1	
	1878	73	77	.....	1	
	1879	73	71	.....	1	
	1880	75	72	.....	1	
	1881	75	77	.....	1	
	1882	75	76	.....	1	
	1883	75	84	.....	1	
	1884	75	78	.. ....	1	
	1885	75	77			
London	1874	75	40	3		
	1875	75	74	2		
	1876	57	34	5		
	1877	58	35	1		
	1878	58	37	1		
	1879	57	36	2		
	1880	45	27	2		
	1881	45	24	2		
	1882	47	26	3		
	1883	47	24	2		
	1884	48	22	2		
	1885	49	22	1		
Kingston	1874	97	25	.....	1	
	1875	75	20	3	1	
	1876	53	23	6	5	
	1877	61	21	3	8	
	1878	61	21	3	8	
	1879	62	20	3	8	
	1880	62	20	3	8	
	1881	64	20	2	11	
	1882	53	22	2	9	
	1883	53	23	3	6	
	1884	39	20	2	6	
	1885	38	22	1	4	

* Dominion issues.

SCHEDULE B—*Concluded.*

RECAPITULATION, shewing the total number of Provincial Licenses issued in the several Counties in the Province, including the Cities, during the license years 1874-5-6-7-8-9-80-1-2-3-4-5.

Years.	Tavern.	Shop.	Wholesale.	Vessel.	Total.
1874	4703	1307	52	33	6185
1875	4459	1257	78	24	5818
1876	2977	787	147	27	3938
1877	2845	739	65	27	3676
1878	2919	724	52	29	3715
1879	3199	757	42	22	4020
1880	3227	760	40	22	4049
1881	3311	764	34	24	4133
1882	3317	787	35	24	4163
1883	3363	781	36	21	4201
1884	3253	675	28	14	3970
1885	2574	525	24	9	3132

The Six Months' Licenses and the Licenses *extended* do not appear in the above Schedule or recapitulation, and as a consequence the total number of Licenses issued, according to the Statement, does not correspond with the number as shewn in Schedules A and C. Beer and Wine Licenses are included with the ordinary licenses under the heads of Tavern Licenses and Vessel Licenses respectively. An *extended* License is good for a period not exceeding three months. It is not in the nature of a new License, but simply a permission, granted by the Board of Commissioners, to the holder of a license expiring in April, to continue his business under the old license for the specified period, that he may be enabled to dispose of his stock on hand and quit the business without loss. Six Months' Licenses run from the first day of May to the thirty-first day of October, and are not valid after the latter date. They are granted in localities which are largely resorted to in summer by visitors, where the Board of Commissioners are of opinion that increased tavern accommodation for the summer months is necessary.

SCHEDULE C.

COMPARATIVE STATEMENT BY MUNICIPALITIES, shewing the number of Provinical Licenses, whether Ordinary or Beer and Wine, issued, and the number extended, transferred or removed, the gross sums deposited to the credit of the License Fund Accounts therefor, and for Fines, and the revenue paid over to the Municipal Treasurers during the license years 1883-4, 1884-5 and 1885-6 respectively.

License District.	Municipality.	Tavern.						Shop.			Wholesale.			Extended Tavern.			Extended Shop.			Six Months.		
		Ordinary.			Beer and Wine.																	
		1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.
ADDINGTON.	Camden	14	14	13	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	Sheffield	7	7	7	....	....	....	1	1	1	....	....	....	....	....	....	....	....	....	....	....	....
	Newburgh	2	2	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	Loughborough	5	5	4	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	Hinchinbrooke	3	3	3	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	Portland	4	4	4	....	....	....	1	1	1	....	....	....	....	....	....	....	....	....	....	....	....
	Oso	2	2	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	Barrie	1	1	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	Kaladar and Anglesea	3	3	3	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	Palmerston and North and South Canonto	1	2	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	Bedford	1	1	1	....	....	....	1	1	....	....	....	....	....	....	....	....	....	....	....	....	....
	Denbigh, Abinger, etc	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	Olden	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	Kennebec	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
ALGOMA.	Sault Ste. Marie	2	3	3	....	....	....	1	1	1	....	....	....	....	....	....	....	....	....	....	....	....
	Howland	3	3	3	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	Assiginack	2	2	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	Gordon	3	3	3	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	Carnarvon	1	1	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	Tehkummah	1	1	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	St. Joseph	2	2	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	Hilton	....	1	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	Billings	....	1	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	Unorganized Territory	9	6	7	....	....	....	1	2	2	....	....	....	....	....	....	....	....	....	....	....	....

SCHEDULE C.—*Continued.*

Lands Board	Municipality	Leases Transferred and Renewed: Transfers.	Leases Transferred and Renewed: Renewals.	Tax.	Amounts received by Receiver of Leases, Transfer, Renewal and Fines to each Municipality.	Proportion thereof paid to Municipalities.	Remarks.	Payable to Province, less proportion of expenses.
							Public Act in force, 1884-5 and 1885-6.	
ALGOMA	Sault Ste. Marie							
	Hawkesbury							
	Algonquin							
	Clapham							
	Dysart							
	Dudley							
	Harcourt							
	Havelock							
	Eldon							
	Ulverton							
	Unorganized Territory							
ADDINGTON	Camden							
	Sheffield							
	Newcastle							
	Loughborough							
	Hinchinbrooke							
	Portland							
	Otis							
	Barrie							
	Kaladar and Anglesea							
	Palmerston and Canonto							
	South Canonto							
	Bedford							
	Township Abingdon							
	Colden							
	Kennedy							

SCHEDULE C.—Comparative Statement by Municipalities, shewing the Number of Provincial Licenses, etc. *Continued.*

License Districts.	Municipality.	Tavern. Ordinary.			Tavern. Beer and Wine.			Shop.			Wholesale.			Extended Tavern.			Extended Shop.			Six Months.		
		1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.
NORTH BRANT.	Paris	8	8	8				2	2	2												
	South Dumfries	5	5	3																		
	Brantford, T'ship, northerly portion	4	3	3																		
	Onondaga	3	3	3																		
SOUTH BRANT.	Brantford, City	25	21	17			1	9	5	5	1	1 ext.	2 ext.	1		3		1				
	Brantford, T'ship, southerly portion	6	4	3																		
	Oakland	2	2	2																		
	Burford	5	3	4																		
BROCKVILLE & SOUTH LEEDS.	Brockville	20	20	19				5	5	5				2								
	Gananoque	8	7	7				4	2	1												
	Newboro'	2	1	2				2	1	1								2	1			
	Bastard and Burgess	6	5	5				2	2	2					2							
	Rear of Yonge	3	3	3																		
	North Crosby	3	3	3				1	1	2												
	South Crosby	3	1	2						1												
	Rear of Leeds and Lansdowne	5	5	4				2	2	1												
	Elizabethtown	6	5	5																1	2	1
	Front of Yonge																					
	Front of Leeds and Lansdowne																					
	Front of Escott	2	2																		1	
	Escott			3																		

SCHEDULE C.—*Continued.*

Licensed Districts.	Municipality.	Leases Transferred and Renewed.			Total			Amounts received by Provincial Treasurer, Treasurer, Renewals and Fees to such Municipality			Proportion thereof paid to Municipalities			Remarks.
		Transfers.		Renewals.										
		1884.	1885.	1886.	1884.	1885.	1886.	1884.	1885.	1886.	1884.	1885.	1886.	
NORTH HEANT.	Digby South Domigo Brantford, Tiverton, and Oakdale Cambridge	1	1	1	1	1	1	s. 45 d. 35	s. 45 d. 35	s. 45 d. 35	s. 45 d. 35	s. 45 d. 35	s. 45 d. 35	
SOUTH HEANT.	Beaufort City Beaumont, Tiverton, and Oakdale Bartlett	1			1			s. 337 12 d. 81 45	s. 337 12 d. 81 45	s. 337 12 d. 81 45	s. 337 12 d. 81 45	s. 337 12 d. 81 45	s. 337 12 d. 81 45	
BROCKVILLE & SOUTH LEEDS.	Brockville Gananoque Athens Beckwith and Lanark Rear of Yonge South Crosby Rear of Leeds and Lansdowne Elizabethtown Front of Yonge Front of Leeds and Lansdowne Front of Leeds	1	1	1	1	1	1	s. 3885 60 d. 1161 60 s. 955 20 d. 1388 80 s. 1799 60 d. 42 80	s. 3885 60 d. 1161 60 s. 955 20 d. 1388 80 s. 1799 60 d. 42 80	s. 3885 60 d. 1161 60 s. 955 20 d. 1388 80 s. 1799 60 d. 42 80	s. 42 68 d. 196 95	s. 42 68 d. 196 95	s. 42 68 d. 196 95	† Dunkin Act in force.

SCHEDULE C.—Comparative Statement by Municipalities, showing the number of Provincial Licenses, etc.—*Continued.*

License District.	Municipality.	Tavern. Ordinary.			Tavern. Beer and Wine.			Shop.			Wholesale.			Extended Tavern.			Extended Shop.			Six Months.		
		1884.	1885.	1886.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.
NORTH BRUCE.	Wiarton	4	4					1	1													
	Amabel	2	2																			
	Albemarle	1	1																			
	Arran	6	5																			
	Bruce	2	2																			
	Elderslie	1																				
	Port Elgin	4	4					1	1													
	Paisley	4	4					2						1				1				
	Southampton	4	4					1	1											1	1	
	Saugeen	1	1																			
	Tiverton	3	2												1							
	Chesley	3	3					1	1													
	Tara	3	2					1	1						1							
	Eastnor, Lindsay and St. Edmund	4	4																			
SOUTH BRUCE.	Kincardine, Town	8	8					1	2													
	Carrick	11	11					2	2													
	Walkerton	8	6					2	2													
	Kinloss	4	3																			
	Greenock	2	1																			
	Culross	2	2																			
	Brant	8	8																			
	Kincardine, Township	2	2																			
	Huron	5	5					1	1													
	Lucknow	5	5					2	2													
	Teeswater	4	4					1	1													
CARDWELL.	Adjala	11	10					1														
	Caledon	11	9	11				1	1	1												
	Tecumseth	10	10					3	2													
	Bolton	2	3	3																2		
	Albion	8	7	8																		

SCHEDULE C.—*Continued.*

Licence District	Municipality	Licenses Transferred and Removed. Transfers 1883-4	Transfers 1884-5	Transfers 1885-6	Removals 1883-4	Removals 1884-5	Removals 1885-6	Total. 1883-4	Total. 1884-5	Total. 1885-6	Amounts received for Provincial Licenses, Transfers, Removals and Fines in each Municipality. 1883-4	1884-5	1885-6	Proportion thereof paid to Municipalities. 1883-4	1884-5	1885-6	Remarks.
											$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	
NORTH RIDING.	Wroxton							5	5		500 00	660 00		362 20	389 10		
	Arnaud	1						3	2		125 00	141 00		64 04	64 95		
	Albemarle							1	1		60 00	72 00		32 44	32 48		
	Ames							6	5		360 00	360 00		194 64	162 32		
	Dysart							2	2		120 00	144 00		64 88	73 53		
	Eldorado							1			60 00			32 44			
	Port Sarnia							5	5		600 00	740 00		462 20	478 59		
	Parabo							6	5		680 00	515 00		488 16	312 98		Canada Temperance Act in force.
	Southampton	1						7	6		395 00	440 00		178 41	178 58		
	Saugeen							1	1		60 00	72 00		32 44	32 46		
	Dyrham							3	3		225 00	265 00		142 32	136 94		
	Elsmere							4	4		470 00	530 00		345 30	339 88		
	Tara							4	4		360 00	406 25		249 76	251 77		
	Eastnor, Lindsay and Bolsover							4	4		240 00	288 00		124 82	129 86		
SOUTH RIDING.	Kincardine, Town	4	4					13	14		1230 00	1330 00		831 26	851 73		
	Carrick	1	1				1	14	13		785 00	991 00		444 06	462 94		
	Walkerton	1					1	12	8		1190 00	1200 00		838 23	677 72		
	Kinloss							4	3		240 00	276 00		136 75	120 25		
	Greenock	3						12	7		765 00	504 00		314 01	234 76		
	Culross							2	2		120 00	144 00		67 86	67 08		Canada Temperance Act in force.
	Brant	1						9	8		485 00	576 00		274 37	268 32		
	Kincardine, Township	1						3	2		175 00	144 00		99 22	67 08		
	Huron	1	1					13	11		885 00	822 00		218 47	241 35		
	Lucknow	1						8	11		945 00	1000 00		682 82	626 59		
	Tuscarora	1	1					6	6		405 00	525 00		272 54	279 96		
GREY AND WELLINGTON.	Arthur	2						13	10		790 00	800 00	20 00	406 15	336 42	8 16	Can. Temp. Act in force.
	Caledon	3	2	2				15	15	14	795 00	750 00	894 00	406 94	304 25	305 15	
	Townsend					1		16	13		780 00	919 00		398 79	383 39		Can. Temp. Act in force.
	Eden		1					4	4	3	270 00	335 00	370 00	182 04	181 54	179 50	
	Albion	2		1				10	7	9	490 00	524 00	621 00	250 54	217 67	213 65	

SCHEDULE C.—Comparative Statement by Municipalities, showing the number of Provincial Licenses, etc.—*Continued.*

License District.	Municipality.	Tavern.				Shop.				Wholesale.				Extended Tavern.				Extended Shop.				Six Months.			
		Ordinary.				Beer and Wine.																			
		1883-4.	1884-5.	1885-6.	1886-7.	1883-4.	1884-5.	1885-6.	1886-7.	1883-4.	1884-5.	1885-6.	1886-7.	1883-4.	1884-5.	1885-6.	1886-7.	1883-4.	1884-5.	1885-6.	1886-7.	1883-4.	1884-5.	1885-6.	1886-7.
CARLETON.	Huntley	3	3	3	3																				
	North Gower	3	3	3	3																				
	Marlborough	1	1	1	1																				
	Goulburn	3	3	3	3																				
	Richmond	2	2	2	2																				
	March	2	2	2	2		1																		
	Nepean	24	24	25	25									1	1										
	Tarbolton					1																			
	Fitzroy																								
CORNWALL.	Cornwall, Township	12	13				2	3																	
	Cornwall, Town	10	11				4	3																	
DUFFERIN.	Orangeville	9	9				4	3																	
	Mulmur	5	5																						
	Mono	4	5																						
	Melancthon	6	6																						
	Garafraxa, East	4	3				1	1																	
	Shelburne	3	3																						
	Amaranth	3	3																						

SCHEDULE C.—*Continued.*

Licence Districts.	Municipality.	Licenses Transferred and Removed.						Total.			Amounts received for Provincial Licenses, Transfers, Removals and Fines in each Municipality.			Proportion thereof paid to Municipalities.			Remarks.
		Transfers.			Removals.												
		1884.	1885.	1886.	1884.	1885.	1886.	1884.	1885.	1886.	1884.	1885.	1886.	1884.	1885.	1886.	
											$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	
CARLETON.	Huntley							3	3	3	240 00	236 00	216 00	124 37	105 27	92 29	
	North Gower		1					5	6	5	400 00	365 00	400 00	207 27	160 53	174 35	
	Marlborough	1						2	1	1	85 00	72 00	72 00	44 04	31 59	30 77	
	Goulbourn		1	1				3	4	4	225 00	281 00	281 00	116 59	128 95	94 86	
	Richmond							2	3	2	160 00	240 00	200 00	82 91	94 74	82 03	
	March	1						3	2	2	125 00	144 00	144 00	64 77	63 15	61 53	
	Nepean	3	2	3		1		28	27	28	1593 00	1766 00	1766 00	825 41	776 33	758 89	
	Tarbolton										20 00			10 36			Dunkin Act in force.
	Fitzroy											20 00			10 53		do. do. do.
COUNTY OF GLENGARRY.	Cornwall, Township	1	2					15	17		1320 00	1315 00		705 91	682 65		
	Cornwall, Town	2	2		2			18	16		2840 00	3460 00		2287 87	2445 78		Canada Temp. Act in force.
DUFFERIN.	Orangeville	5	1					18	15		1800 00	1945 00		1244 76	1110 52		
	Mulmur	1	1					8	6		535 00	505 00		173 28	158 07		
	Mono							4	6		260 00	365 00		134 52	158 08		
	Melancthon	1						8	6		410 00	482 00		242 08	186 59		Can. Temp. Act in force.
	Garafraxa, East							4	5		240 00	270 00		124 15	93 29		
	Shelburne	2						5	4		350 00	380 00		200 38	174 76		
	Amaranth							3	3		180 00	226 00		93 14	98 49		

SCHEDULE C.—Comparative Statement by Municipalities, shewing the number of Provincial Licenses, etc.—*Continued.*

License District.	Municipality.	Tavern.				Shop.				Wholesale.				Extended Tavern.				Extended Shop.				Six Months.			
		Ordinary.				Beer and Wine.																			
		1883-4.	1884-5.	1885-6.	1886-7.	1883-4.	1884-5.	1885-6.	1886-7.	1883-4.	1884-5.	1885-6.	1886-7.	1883-4.	1884-5.	1885-6.	1886-7.	1883-4.	1884-5.	1885-6.	1886-7.	1883-4.	1884-5.	1885-6.	1886-7.
DUNDAS.	Iroquois	4	4																						
	Matilda																								
	Morrisburgh	5	5																						
	Winchester	6	6																						
	Williamsburgh	4	4																						
	Mountain	4	4																						
EAST DURHAM.	Millbrook	4	4	4		1	2	1																	
	Manvers	5	4	2																					
	Cavan	5	5	5																					
	Hope	2	2	1																					
	Port Hope	15	15	15		7	5	4						2											
WEST DURHAM.	Darlington	3	3	3																					
	Cartwright	3	3	2																				1	
	Bowmanville	5	5	5		2	2	2																	
	Newcastle	4	4	4		1	1	1						1											
	Clarke	4	4	4																					

SCHEDULE C.—*Continued.*

License District.	Municipality.	Licenses Transferred and Removed.						Total.			Amounts received for Provincial Licenses, Transfers, Removals, and Fines in each Municipality.			Amounts paid to Municipalities.			Remarks.
		Transfers.			Removals.												
		1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	
											$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	
LONDON.	Dorchester	1						6	4	.....	505 00	600 00	.....	326 13	370 87	.....	
	Matilda										40 00	11 00	.....	16 56	4 68	.....	
	Metcalfe	1						6	7	.....	680 00	1165 00	.....	471 83	784 09	.....	[force.
	Westminster							6	6	.....	600 00	732 00	.....	388 88	419 09	.....	Canada Temperance Act in
	Williamsburgh	1						5	4	.....	365 00	368 00	.....	186 15	170 87	.....	
	Mountain							4	4	.....	240 00	288 00	.....	99 28	102 33	.....	
EAST MIDDLESEX.	Mailland	1		1				6	5	6	465 00	560 00	625 00	323 24	317 22	350 90	
	Mosa		1	1				7	5	3	356 66	293 00	149 00	190 91	128 40	65 38	
	Caradoc							5	5	5	300 00	360 00	360 00	160 64	157 23	156 92	
	Ekfrid	2	1					4	2	1	160 00	179 00	87 00	99 59	95 52	46 38	
	Strathroy	3	3	3		1		26	24	22	3315 00	3620 00	3480 00	2490 01	2249 05	2156 41	
WEST MIDDLESEX.	Delaware							3	3	3	240 00	276 00	250 00	137 17	140 39	106 81	
	Carradoc		1					5	4	3	210 00	241 00	180 00	90 07	91 38	65 38	
	Ennismore	2	3	2				9	10	9	1055 00	1150 00	1125 00	717 93	599 71	582 17	
	Newbigging	1						6	5	5	423 75	460 00	430 00	240 95	194 01	203 85	
	Clarke							4	4	4	300 00	340 00	340 00	162 89	159 20	156 62	

SCHEDULE C.—Comparative Statement, by Municipalities, shewing the number of Provincial Licenses, etc.—*Continued.*

License District.	Municipality.	Tavern.			Shop.			Wholesale.			Extended Tavern.			Extended Shop.			Six Months.		
		Ordinary.		Beer and Wine.															
		1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.
EAST ELGIN.	Bayham	8	7	6			1												
	South Dorchester	5	5	4															
	Malahide	8	9	7															
	Yarmouth	2	2	2			1												
	Vienna	2	4	4	1	1				1									
	Aylmer	5	22	22	1	1	1			1									
	St. Thomas	22	22	22	9	7	5												
	Springfield	2	2	2															
WEST ELGIN.	Dunwich	6	7	7	2	1	1												
	Aldborough	6	7	6	1														
	Southwold	8	7	7															
	Port Stanley	2	2	2	1	1	1												
NORTH ESSEX.	West Tilbury	8	8	10															
	Maidstone	2	2	2															
	Windsor	17	17	17	7	6	6	2	1										
	Rochester	3	3	4															
	East Sandwich	10	7	9	2	2	2										1	1	1
	West Sandwich	3	4	4															
	Sandwich, Town	5	4	6	3	3	3										1		
	Belle, River	2	2	2	2									1					

SCHEDULE C—*Continued.*

Licenses Issued.	Municipalities.	Tavern Licenses Transferred and Removed.			Total.			Amounts received for Tavern and Storekeepers' Licenses, Transfers, Removals and Fines in each Municipality.						Proportion thereof paid to Municipalities.						Remarks.
		Transfers.		Removals.																
		1884.	1885.	1886.	1884.	1885.	1886.	1884.		1885.		1886.		1884.		1885.		1886.		
								$	c.	$	c.	$	c.	$	c.	$	c.	$	c.	
EAST RIDING	Beaufort	1			3	4	4	300	00	400	00	400	00	90	00	120	00	120	00	
	Lonely Peninsula																			
	Mahukona				1	1	1	100	00	100	00	100	00	30	00	30	00	30	00	
	Waimanalo				1	1	1	100	00	100	00	100	00	30	00	30	00	30	00	
	Waimea				1	1	1	100	00	100	00	100	00	30	00	30	00	30	00	
	Waipio				1	1	1	100	00	100	00	100	00	30	00	30	00	30	00	
	Ft. Timanu				1	1	1	100	00	100	00	100	00	30	00	30	00	30	00	
	Cunningham				1	1	1	100	00	100	00	100	00	30	00	30	00	30	00	
	Total	1			9	10	10	900	00	1000	00	1000	00	270	00	300	00	300	00	
WEST RIDING	Honolulu				11	12	12	3300	00	3600	00	3600	00	990	00	1080	00	1080	00	
	Ahuimanu				1	1	1	100	00	100	00	100	00	30	00	30	00	30	00	
	Kaalaea				1	1	1	100	00	100	00	100	00	30	00	30	00	30	00	
	Ewa Plantation				1	1	1	100	00	100	00	100	00	30	00	30	00	30	00	
	Total				13	15	15	3600	00	3900	00	3900	00	1080	00	1170	00	1170	00	
NORTH ISSEX	Waialua				2	2	2	200	00	200	00	200	00	60	00	60	00	60	00	
	Kahuku				1	1	1	100	00	100	00	100	00	30	00	30	00	30	00	
	Waimea				1	1	1	100	00	100	00	100	00	30	00	30	00	30	00	
	Kawaihau				1	1	1	100	00	100	00	100	00	30	00	30	00	30	00	
	Lihue				1	1	1	100	00	100	00	100	00	30	00	30	00	30	00	
	West Koolau				1	1	1	100	00	100	00	100	00	30	00	30	00	30	00	
	Waimea				1	1	1	100	00	100	00	100	00	30	00	30	00	30	00	
	Koolauloa				1	1	1	100	00	100	00	100	00	30	00	30	00	30	00	
	Hale Kipa				1	1	1	100	00	100	00	100	00	30	00	30	00	30	00	

SCHEDULE C.—Comparative Statement, by Municipalities, shewing the number of Provincial Licenses, etc.—*Continued.*

License District.	Municipality.	Tavern.				Shop.				Wholesale.				Extended Tavern.				Extended Shop.				Six Months.			
		Ordinary.																							
		1883-4.	1884-5.	1885-6.	Beer and Wine. 1883-4.	1883-4.	1884-5.	1885-6.		1883-4.	1884-5.	1885-6.		1883-4.	1884-5.	1885-6.		1883-4.	1884-5.	1885-6.		1883-4.	1884-5.	1885-6.	
SOUTH ESSEX.	Mersea	2	2	2																					
	Leamington	4	5	5																					
	Amherstburgh	7	6	6		1	4	2								1									
	Anderdon	3	2	3		4												1							
	Malden	2	3	1																					
	Gosfield	4	3	3																					
	Kingsville	2	2	2																					
	Essex Centre		1	1																					
	Colchester, North																								
	Colchester, South																								
FRONTENAC.	Kingston, Township	5	5	4																					
	Storrington	3	2	3																					
	Pittsburgh	5	4	5																					
	Wolfe Island	3	2	2			1																		
	Portsmouth	3	3	3																					
GLENGARRY.	Charlottenburgh	9	9			1	1																		
	Lochiel	7	4			3																			
	Lancaster	7	8			3	2																		
	Kenyon	6	6			1	1																		
	Alexandria	4					3																		

SCHEDULE C—*Continued.*

Licensed Districts.	Municipalities.	Leases, Transferred and Renewed: Transfers. 1884	1885	1886	1887	Leases, Transferred and Renewed: Renewals. 1884	1885	1886	1887	Total. 1884	1885	1886	1887	Amounts received for Perpetual Leases, Transfers, Renewals, and Fines in each Municipality. 1884	1885	1886	1887	Proportion thereof paid to Municipalities. 1884	1885	1886	1887	Remarks.
GLENGARRY	Cleveland-dump.													£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	Con. Temp. Act in force.
	Lochiel																					
	Lancaster																					
	Kenyon																					
	Alexandria																					
FRONTENAC	Kingston, Township																					
	Storrington																					
	Pittsburgh																					
	Wolfe Island																					
	Portsmouth																					
SOUTH ESSEX	Mersea																					
	Leamington																					
	Anderdon																					
	Amherstburg																					
	Malden																					
	Gosfield																					
	Rochester																					
	Pelee Island																					
	Colchester, North																					
	Colchester, South																					

SCHEDULE C.—Comparative Statement, by Municipalities, showing the number of Provincial Licenses, etc.—*Continued.*

License District.	Municipality.	Tavern.			Shop.			Wholesale.			Extended Tavern.			Extended Shop.			Six Months.		
		Ordinary.			Beer and Wine.														
		1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.
EAST GREY.	Artmesia	7	7	7															
	Proton	6	7	7				1	1	1									
	Holland	7	7	7				1	1	1									
	Collingwood, Township	7	7	7				1	1	1									
	Euphrasia	2	3	3															
	Osprey	5	5	5															
NORTH GREY.	Owen Sound	12	12	12				6	6	6									
	Sullivan	3	3	3				2	2	2									
	Meaford	7	6	5				2	2	2									
	Derby	4	3	4															
	Keppel	2	2	2															
	Sydenham	4	2	3															
	St. Vincent	1	2	1															
SOUTH GREY.	Durham	4	4	4				2	2	2									
	Bentinck	5	4	5				3	3	3									
	Glenelg	4	4	5				2	2	2									
	Normanby	12	10	10			1												
	Egremont	3	3	1															

SCHEDULE C.—*Continued.*

Licensed Districts.	Municipality	Licenses Transferred and Renewed.		Total			Amounts received for Processed Licenses, Transfers, Renewals, and Fines in each Municipality.			Proportion thereof paid to Municipalities.			Remarks.
		Transfers.	Renewals.	1886.	1885.	1884.	1886.	1885.	1884.	1886.	1885.	1884.	
		1884.	1884.				£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	
SOUTH GREY.	Durham												
	Bentinck												
	Glenelg												
	Normanby												
	Egremont												
NORTH GREY.	Owen Sound												
	Collingwood												
	Meaford												
	Derby												
	Sydenham												
	Keppel												
	Sarawak												
EAST GREY.	Artemesia												
	Proton												
	Holland												
	Collingwood Township												
	Euphrasia												
	Osprey												
License Districts.													

SCHEDULE C.—Comparative Statement by Municipalities, shewing the number of Provincial Licenses, etc. *Continued.*

License District.	Municipality.	Tavern.			Shop.		Wholesale.		Extended Tavern.		Extended Shop.		Six Months.		
		Ordinary.		Beer and Wine.											
		1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1883-4.	1884-5.	1883-4.	1884-5.	1883-4.	1884-5.	1883-4.	1884-5.	1885-6.
HALDIMAND.	Cayuga Village	5	5	5	1	1									
	Caledonia	4	3	4	1	1									
	Oneida	3	3	3											
	Cayuga, North, Township	4	3	3											
	Dunn	5	3	4											
	Rainham	4	4	4											
	Walpole	12	11	10	1	1					1				
	Seneca	5	5	4											
					-										
HALTON.	Nelson														
	Nassagaweya														
	Esquesing														
	Burlington														
	Georgetown														
	Oakville														
	Milton														
	Acton														
	Trafalgar														
HAMILTON.	Hamilton, City	103	96	108	2	1	54	47	48	8	4 1 Ext.	3	3	1 B. & W.	.....

License District.	Municipality.	Six Months.		
		1883-4.	1884-5.	1885-6.
HALDIMAND.	Cayuga Village			
	Caledonia			
	Oneida			
	Cayuga, North, Township			
	Dunn			
	Rainham			
	Walpole			
	Seneca			
HALTON.	Nelson			
	Nassagaweya			
	Esquesing			
	Burlington			
	Georgetown			
	Oakville			
	Milton			
	Acton			
	Trafalgar			
HAMILTON.	Hamilton, City	2 B. & W.	1 B. & W.	1 B. & W.

SCHEDULE C.—*Continued.*

License District.	Municipality.	Licenses Transferred and Removed.						Total.			Amounts received for Provincial Licenses, Transfers, Removals and Fines in each Municipality.			Proportion thereof paid to Municipalities.			Remarks.
		Transfers.			Removals.												
		1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	
											$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	
HALDIMAND.	Cayuga Village		1					6	7	6	480 00	616 00	630 00	313 59	302 55	330 43	
	Caledonia							5	4	5	620 00	580 00	740 00	472 07	570 03	483 45	
	Oneida							3	3	3	200 00	236 00	216 00	107 55	100 03	97 13	
	Cayuga, North, Township	2			1			7	3	3	256 00	216 00	216 00	137 13	90 00	97 13	
	Dunn							5	3	4	300 00	216 00	288 00	161 31	90 00	129 54	
	Rainham																
	Walpole	2	1	1		1		4	4	4	240 00	288 00	288 00	129 07	120 00	129 49	
	Seneca	1	2					15	14	12	816 00	874 00	748 00	438 29	365 09	334 54	
								6	7	5	405 00	470 00	424 00	264 07	255 04	245 68	
HALTON.	Nelson																Scott Act in force, 1882-3-4-5, and Druggists' licenses issued thereunder, viz.: in 1882-3, 2 in Oakville, 1 in Milton, 1 in Acton, and 1 in Georgetown; in 1883-4, 1 in Milton, 1 in Georgetown, 1 in Oakville, 1 in Acton and 1 in Burlington; and in 1884-5, 1 in Oakville, 1 in Acton and 1 in Esquesing.
	Nassagaweya																
	Esquesing																
	Burlington																
	Georgetown										2435 00	614 10					
	Oakville																
	Milton																
	Acton																
	Trafalgar																
HAMILTON.	Hamilton, City	28	10	82	5	1	5	206	162	190	26284 65	32038 75	34795 00	18746 06	16496 92	18042 21	

SCHEDULE C.—Comparative Statement, by Municipalities, shewing the number of Provincial Licenses, etc.—*Continued.*

License District.	Municipality.	Tavern.						Shop.			Wholesale.			Extended Tavern.			Extended Shop.			Six Months.		
		Ordinary.			Beer and Wine.																	
		1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.
EAST HASTINGS.	Tyendinaga	9	10	10	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....
	Hungerford	8	8	8	....	....	....	3	2	2	....	....	....	....	....	....	....	....	....	....	....	....
	Thurlow	9	10	9	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	Deseronto (formerly Mill Point)	4	4	4	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
NORTH HASTINGS.	Marmora and Lake	4	4	4	....	....	....	1	1	1	....	....	....	....	....	....	....	....	....	....	....	....
	Huntingdon	2	2	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	Stirling	3	3	3	....	....	....	2	2	2	....	....	....	....	....	....	....	....	....	....	....	....
	Madoc, Township	2	3	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	Elzevir and Grimsthorpe	2	2	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	Tudor and Limerick	3	4	6	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	Wollaston	1	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	Monteagle and Herschel	2	1	1	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....
	Rawdon	2	2	2	....	....	....	3	3	....	....	....	....	....	....	....	....	....	....	....	....	....
	Madoc, Village	4	4	4	....	....	....	....	....	3	....	....	....	....	....	....	....	....	....	....	....	....
	Wicklow and Bangor	1	1	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	Dungannon and Faraday	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
WEST HASTINGS.	Belleville	25	25	25	....	....	....	4	5	5	3	3	3	1	....	....	....	....	....	1	1	1
	Trenton	10	10	10	....	....	....	2	2	3	....	....	....	2	....	....	....	....	....	....	....	1
	Sidney	6	5	5	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....

SCHEDULE C.—*Continued.*

License District.	Municipality.	Licenses Transferred and Removed.		Total.			Amounts received for Provincial Licenses, Transfers, Renewals and Fines in each Municipality.			Proportion thereof paid to Municipalities.			Remarks.
		Transfers.	Removals.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	
							$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	
EAST HASTINGS.	Tyendinaga	3		10	10	11	600 00	720 00	780 00	287 53	279 17	293 72	
	Hungerford	1		15	11	10	750 00	795 00	810 00	345 69	281 50	316 33	
	Thurlow	1	1	10	10	9	540 00	720 00	720 00	261 16	288 48	379 25	
	Tweed (formerly Mill Point)	1		5	4	6	825 00	870 00	870 00	686 32	671 66	676 37	
NORTH HASTINGS.	Marmora and Lake	1	1	6	6	6	310 00	360 00	360 00	146 11	142 67	140 41	
	Huntingdon			2	2	2	120 00	144 00	144 00	56 52	57 10	55 55	
	Madoc Township	1		3	3	3	465 00	505 00	505 00	271 97	242 79	242 79	
	Madoc Village			2	2	2	120 00	240 00	240 00	56 52	89 21	62 47	
	Elzevir and Grimsthorpe			2	2	2	120 00	144 00	144 00	56 52	55 10	56 56	
	Tudor and Limerick	1		3	3	3	180 00	288 00	288 00	84 81	106 03	173 12	
	Wollaston			1	1	1	60 00	96 00	96 00	28 26	34 84	23 04	
	Montague and Oxford	1		2	2	2	120 00	144 00	144 00	56 52	55 03	56 01	
	Rawdon			3	3	3	165 00	177 00	177 00	77 67	67 48	56 95	
	Marlbank Village			10	10	9	815 00	825 00	840 00	382 64	479 80	340 70	
	Whitbourne and Tichborne	1		1	1	1	60 00	72 00	72 00	28 26	34 70	27 68	
	Deseronto and Murray							50 00	60 00		8	6 56	
	Carlow and Mayo											9 46	
WEST HASTINGS.	Belleville	7	1	41	38	41	3165 00	1785 00	1755 00	1361 49	3711 61	3671 87	
	Trenton	1		15	15	14	1187 50	1395 00	2302 50	1171 12	1020 34	1333 09	
	Sidney	2		4	4	3	417 50	495 00	480 00	225 87	166 00	177 11	

SCHEDULE C.—Comparative Statement by Municipalities, shewing the Number of Provincial Licenses, etc.—*Continued.*

License Districts.	Municipality.	Tavern.						Shop.			Wholesale.			Extended Tavern.			Extended Shop.			Six Months.		
		Ordinary.			Beer and Wine.																	
		1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.
EAST HURON.	Grey	8	6	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	McKillop	4	3	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	Hullett, East part	2	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	Morris	2	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	Howick	7	7	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	Turnberry, East part	3	3	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	Brussels	5	4	....	....	....	....	1	1	....	....	....	....	1	....	....	....	....	....	....	....	....
	Wroxeter	3	2	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....
SOUTH HURON.	Exeter	5	5	....	....	....	....	2	2	....	....	....	....	....	....	....	....	....	....	....	....	....
	Seaforth	7	7	....	....	....	....	2	2	....	....	....	....	....	....	....	....	....	....	....	....	....
	Goderich, Township, S. p't	1	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	Bayfield	3	2	....	....	....	....	1	1	....	....	....	....	....	....	....	....	....	....	....	....	....
	Stephen	11	10	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	Usborne	3	3	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	Hay	7	5	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	Tuckersmith	4	4	....	....	....	....	1	1	....	....	....	....	....	....	....	....	....	....	....	....	....
	Stanley	4	4	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
WEST HURON.	Goderich, Town	10	9	....	....	....	....	3	3	....	....	....	....	....	1	....	....	....	....	....	....	....
	Wawanosh, East	1	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	Hullett, West part	2	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	Wawanosh, West	2	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	Turnberry, West part	1	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	Wingham	6	6	....	....	....	....	2	2	....	....	....	....	....	....	....	....	....	....	....	....	....
	Clinton	8	8	....	....	....	....	2	1	....	....	....	....	....	....	....	....	....	....	....	....	....
	Ashfield	5	5	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....
	Colborne	6	6	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	1	....
	Blythe	4	4	....	....	....	....	1	1	....	....	....	....	....	....	....	....	....	....	....	....	....

SCHEDULE C.—*Continued.*

License Districts.	Municipality.	Licenses Transferred and Removed.						Total.			Amounts received for Provincial Licenses, Transfers, Removals and Fines in each Municipality.			Proportion thereof paid to Municipalities.			Remarks.
		Transfers.			Removals.												
		1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	
											$ c.	c.	$ c.	$ c.	$ c.	c.	
EAST HURON.	Grey		1					8	7		500 00	457 00		236 25	171 44		Can. Temp. Act in force.
	McKillop	2						6	3		270 00	216 00		127 57	80 44		
	Hullett, East part	2	1					4	3		130 00	149 00		61 43	55 68		
	Morris							2	2		120 00	184 00		56 69	71 25		
	Huron	2	2					9	9		470 00	564 00		222 07	209 31		
	Tuckersmith, East part	2	1					5	4		190 00	241 00		89 78	91 29		
	Brussels	4			1			12	5		735 00	730 00		500 26	419 21		
	Wroxeter	1	2					4	5		185 00	201 75		87 42	75 82		
SOUTH HURON.	Exeter		2					7	9		770 00	900 00		573 13	565 33		Can. Temp. Act in force.
	Seaforth	4	1			1		13	11		1265 00	1545 00		924 95	925 07		
	Goderich, Township, S. pt.	1						1	1		60 00	72 00		32 41	32 82		
	Bayfield	1				1		5	4		285 00	285 00		157 43	122 63		
	Stephen	2			1			14	10		675 00	740 00		573 00	337 80		
	Usborne							3	3		180 00	216 00		97 22	98 52		
	Hay	1	1					8	7		505 00	492 00		278 83	228 63		
	Tuckersmith							5	5		300 00	360 00		162 04	164 15		
	Stanley							4	4		260 00	288 00		143 63	131 32		
WEST HURON.	Goderich, Town	1	3					14	14		1740 00	1913 75		1214 88	1069 57		Can. Temp. Act in force.
	Wawanosh, East							1	1		100 00	72 00		56 06	31 72		
	Hullett, West part	1						3	2		130 00	144 00		72 88	63 46		
	Wawanosh, West							2	2		130 00	144 00		86 89	63 46		
	Tuckersmith, West part	1						2	1		65 00	72 00		36 44	31 74		
	Winghan	2						10	8		880 00	980 00		563 65	438 52		
	Clinton	5						15	9		1295 00	1240 00		818 60	593 41		
	Ashfield							6	5		515 00	380 00		176 63	158 68		
	Colborne		1					7	8		390 00	473 00		218 63	206 34		
	Blyth							5	5		375 00	475 00		243 19	233 68		

SCHEDULE C.—Comparative Statement by Municipalities, shewing the number of Provincial Licenses, etc.—*Continued.*

License District.	Municipality.	Tavern. Ordinary.			Tavern. Beer and Wine.			Shop.			Wholesale.			Extended Tavern.			Extended Shop.			Six Months.		
		1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.
EAST KENT.	Howard	4	4	2	....	....	....	1	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Blenheim	4	4	4	....	....	....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Dresden	5	5	6	....	....	....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....
	Thamesville	3	3	3	....	....	....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
	Camden	2	3	3	....	....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Bothwell	4	4	3	....	....	....	1	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Harwick	10	11	10	....	....	....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Orford	6	6	5	....	....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Ridgetown	4	5	5	....	....	....	2	2	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
WEST KENT.	Chatham, Town	17	18	17	....	....	....	6	6	3	.....	.....	.....	1	.....	.....	.....	.....	1	.....	.....	.....
	Chatham, Township	5	5	5	....	....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Dover	2	3	3	1	....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Wallaceburg	4	4	5	....	....	....	1	1	1	.....	.....	.....	.....	.....	.....	....	.....	.....	.....	.....	.....
	Tilbury, East	....	....	....	....	....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Raleigh	....	....	....	....	....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Romney	....	....	....	....	....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
KINGSTON.	Kingston, City	52	38	41*	1	1	1	23	20	22	3	2 & 1 Ex	1	.....	1	2	.....	1	.....	.....	.....	.....

SCHEDULE C.—*Continued.*

License District.	Municipality.	Licenses Transferred and Removed.						Total.			Amounts received for Provincial Licenses, Transfers, Removals, and Fines in each Municipality.			Proportion thereof paid to Municipalities.			Remarks.
		Transfers.			Removals.												
		1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	
											$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	
EAST KENT.	Howard		1					5	6	3	300 00	385 00	276 00	165 40	175 21	125 39	
	Bleahcum	1						6	4	4	485 00	520 00	540 00	339 19	283 30	267 21	
	Dresden	1	1	1				6	7	7	675 00	1095 00	979 00	484 33	626 41	560 73	
	Thamesville	1						5	4	3	505 00	415 00	360 00	395 09	260 13	214 05	
	Camden		1	1				2	4	4	120 00	241 00	241 00	66 14	110 51	107 11	
	Bothwell	2	1					7	6	4	620 00	785 00	605 00	436 07	439 12	332 22	
	Harwich	2	3					13	14	10	730 00	907 00	860 00	402 50	417 79	386 59	
	Orford			1				6	6	6	380 00	432 00	365 00	209 53	194 07	159 36	
	Ridgetown	1	3	2				7	10	9	755 00	1175 00	1010 00	537 43	699 97	518 29	
WEST KENT.	Chatham, Town	4	3	2				28	27	23	8087 50	9035 00	7622 50	7109 44	7298 52	6073 40	
	Chatham, Township		1	1				5	6	6	300 00	365 00	365 00	151 43	151 11	144 55	
	Dover		1					3	4	3	235 00	266 00	261 00	140 91	136 66	130 32	
	Williamsburg	3		1				8	5	7	645 00	730 00	895 00	489 01	438 67	572 47	
	Tilbury, East											60 00					Prohibitory by-law, under C.S.U.C., cap. 54, in force.
	Raleigh										93 75	40 00	85 00	46 73		40 30	Dunkin Act in force.
	Romney																
KINGSTON.	Kingston, City	6	4	1			1	85	68	69	12125 00	14211 50	14564 50	8514 53	7697 79	7629 11	

* Including four vessels.

SCHEDULE C.—Comparative Statement, by Municipalities, shewing the number of Provincial Licenses, etc.—*Continued.*

License District.	Municipality.	Tavern.						Shop.			Wholesale.			Extended Tavern.			Extended Shop.			Six Months.		
		Ordinary.			Beer and Wine.																	
		1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.
EAST LAMBTON.	Forest	5	5	5	....	....	....	2	2	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
	Bosanquet	....	....	1	....	....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Warwick	2	2	1	....	....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Brooke	2	2	2	....	....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Wyoming	3	3	2	....	....	1	2	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Watford	3	3	4	....	....	....	2	2	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Euphemia	3	3	3	....	....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Plympton	2	2	1	....	....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Arkona	2	2	2	....	....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Thedford	3	2	1	....	....	....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Alvinston	4	4	4	....	....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
WEST LAMBTON.	Petrolia	8	8	8	....	....	....	3	3	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Moore	8	8	7	....	....	....	1	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Sarnia, Township	1	1	1	....	....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Sombra	7	7	7	....	....	....	2	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Oil Springs	2	2	2	....	....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Enniskillen	3	4	3	....	....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Dawn	1	1	1	....	....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Sarnia, Town	9	10	9	1	....	....	6	5	2	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Point Edward	4	5	4	....	....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
NORTH LANARK.	Lanark, Village	2	2	2	....	....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Pakenham	3	3	3	....	....	....	1	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Dalhousie	2	2	2	....	....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Almonte	4	4	4	....	....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Carleton Place	2	4	5	....	....	....	1	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Ramsay	3	3	3	....	....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Lavant, Township	....	....	....	....	....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Lanark, Township	....	....	....	....	....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

SCHEDULE C.—*Continued.*

License District.	Municipality.	Licenses Transferred and Removed.			Total.			Amounts received for Provincial Licenses, Transfers, Removals and Fines in each Municipality.			Proportion thereof paid to Municipalities.			Remarks.
		Transfers.		Removals.										
		1883-4.	1884-5.	1886-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	
								c.	c.	c.	c.	c.	c.	
								%	%	%	%	%	%	
NORTH LANARK.	Lanark, Village	1			3	4	4	225 00	305 00	360 00	78	97	156	23
	Dalhousie		1		3	3	3	260 00	317 00	327 00	90	101	99	17
	Lanark, Township	1			3	2	3	125 00	154 00	211 00	43	49	64	18
	Montague				4	4	4	100 00	159 00	159 00	34	50	48	11
	Carleton Place		1		3	3	3	225 00	250 00	246 00	78	80	74	41
	Ramsay, Township	1			4	3	3	240 00	246 00	246 00	83	78	74	35
	Lanark, Township								60 00	60 00		19	18	1
WEST LANARK.	Perth	3			11	13	13	1060 00	1469 00	1195 00	361	471	361	31
	Mill				10	8	8	700 00	813 00	696 00	238	260	210	46
	Sarnia, Township	1			1	1	1	70 00	92 00	82 00	24	29	25	10
	Scarboro				3	3	3	120 00	466 00	654 00	41	149	198	21
	St. Sylvester		1		3	3	3	120 00	313 00	286 00	41	100	87	27
	Kinmount		1		4	3	3	80 00	97 00	72 00	27	31	22	16
	Dysart, Township	1			15	16	13	375 00	304 00	215 00	128	97	65	12
	Point Edward	1			6	6	4	48 00	60 00	60 00	16	19	18	1
EAST LANARK.	Ross	6			13	13	9	225 00	365 00	350 00	78	116	106	31
	Brougham				1	1	1	260 00	317 00	327 00	90	101	99	17
	Wards		1		2	2	1	125 00	154 00	211 00	43	49	64	18
	Horton		1		2	2	2	100 00	159 00	159 00	34	50	48	11
	Wyndham				4	4	4	225 00	250 00	246 00	78	80	74	41
	Westmeath		1		3	3	3	240 00	246 00	246 00	83	78	74	35
	Raglan								60 00	60 00		19	18	1
	Pembroke				13	13	9	1060 00	1469 00	1195 00	361	471	361	31
	Alice				10	8	8	700 00	813 00	696 00	238	260	210	46
	Westmeath				1	1	1	70 00	92 00	82 00	24	29	25	10
	Stafford				3	3	3	120 00	466 00	654 00	41	149	198	21
	Clarendon				3	3	3	120 00	313 00	286 00	41	100	87	27
	Litchfield				4	3	3	80 00	97 00	72 00	27	31	22	16
	Pembroke				15	16	13	375 00	304 00	215 00	128	97	65	12
	Petawawa				6	6	4	48 00	60 00	60 00	16	19	18	1

SCHEDULE C.—Comparative Statement by Municipalities, shewing the number of Provincial Licenses, etc.—*Continued.*

License District.	Municipality.	Tavern.						Shop.			Wholesale.			Extended Tavern.			Extended Shop.			Six Months.		
		Ordinary.			Beer and Wine.																	
		1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.
SOUTH LANARK.	Perth	7	7	7	....	....	....	3	3	2	....	....	....	....	....	....	....	....	....	....	....	....
	Smith's Falls	5	5	5	....	....	....	2	2	2	....	....	....	....	....	....	....	....	....	....	....	....
	Beckwith	3	1	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	Bathurst	1	1	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	Drummond	2	2	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	South Sherbrooke	1	1	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	North Elmsley	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	Burgess	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
NORTH LEEDS AND GRENVILLE AND SOUTH GRENVILLE.	Prescott	9	9	9	....	....	....	4	3	3	....	....	....	....	....	....	....	....	....	....	....	1
	Edwardsburgh	3	3	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	South Elmsley	2	2	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	Kemptville	4	4	4	....	....	....	1	1	1	....	....	....	....	....	....	....	....	....	....	....	....
	Kitley	5	5	5	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	Oxford	2	2	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	Augusta	4	4	4	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	Merrickville	3	3	3	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	Wolford	2	2	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	Cardinal	2	2	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
LENNOX.	Napanee	8	8	8	....	....	....	2	2	2	....	....	....	....	....	....	....	....	....	....	....	....
	Bath	2	2	2	....	....	....	2	2	2	....	....	....	....	....	....	....	....	....	....	....	....
	Adolphustown	2	1	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	1
	Amherst Island	2	2	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	Ernestown	5	5	4	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	North Fredericksburgh	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	Richmond	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....

SCHEDULE C.—*Continued.*

License District.	Municipality.	Licenses Transferred and Removed.						Total.			Amounts received for Provincial Licenses, Transfers, Removals and Fines in each Municipality.			Proportion thereof paid to Municipalities.			Remarks.
		Transfers.			Removals.												
		1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	
											$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	
SOUTH LANARK.	Perth	1	1					11	11	9	1505 00	1925 00	1620 00	1088 73	1136 34	934 39	
	Smith's Falls	2	1					9	8	7	1110 00	1010 00	1130 65	815 25	990 95	569 56	
	Beckwith							3	1	2	276 00	92 00	253 24	123 13	37 73	95 65	
	Bathurst	1	1					2	2	1	105 00	97 00	72 00	50 70	40 11	25 37	
	Drummond							2	2	2	130 00	154 00	194 00	67 97	66 60	68 87	
	South Sherbrooke							1	1	1	60 00	92 00	92 00	28 98	48 32	45 37	
	North Elmsley								1			72 00	116 70	.....	28 30	47 34	Dunkin Act in force.
	Burgess										.....	.....	20 00	.....	.....	8 12	
NORTH LEEDS AND GRENVILLE AND SOUTH GRENVILLE.	Prescott			1				13	12	14	2100 00	2430 00	2455 00	1516 62	1560 80	1495 24	
	Edwardsburgh		1					3	4	2	180 00	221 00	144 00	92 41	92 61	61 76	
	South Elmsley							2	2	2	120 00	144 00	144 00	61 63	60 09	61 76	
	Kemptville	1						5	5	5	685 00	800 00	765 00	497 71	550 22	372 25	
	Kitley	2	1					7	6	5	310 00	365 00	380 00	159 22	152 73	164 69	
	Oxford							2	2	2	120 00	144 00	144 00	61 63	60 09	61 76	
	Augusta							4	4	4	240 00	228 00	288 00	123 23	140 21	123 53	
	Merrickville							3	3	3	300 00	360 00	360 00	212 41	220 12	212 65	
	Wolford							2	2	2	120 00	184 00	144 00	61 63	80 14	61 76	
	Cardinal							2	2	2	150 00	190 00	190 00	91 64	90 09	91 76	
LENNOX.	Napanee	2	2	1	1	1		13	13	11	2085 00	2055 00	2078 00	1619 14	1282 33	1207 43	
	Bath	1		1				5	4	5	285 00	370 00	325 00	133 53	107 39	103 13	
	Adolphustown							2	2	2	120 00	108 00	108 00	56 29	40 28	37 88	
	Amherst Island			1				2	2	3	140 00	184 00	140 00	65 75	71 63	52 61	
	Ernestown	1						3	3	4	220 00	205 00	208 00	149 84	154 37	109 43	
	North Fredericksburgh													.....	.....	.....	Dunkin Act in force.
	Richmond										20 00			9 36	.....	.....	

SCHEDULE C.—Comparative Statement by Municipalities, shewing the number of Provincial Licenses, etc.—*Continued.*

License District.	Municipality.	Tavern.						Shop.			Wholesale.			Extended Tavern.			Extended Shop.			Six Months.		
		Ordinary.			Beer and Wine.																	
		1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.
LINCOLN.	Niagara, Township	3	3	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	St. Catharines	31	31	30	....	....	....	9	9	8	....	....	....	1	....	....	....	....	1	1	1	1
	Grimsby, Township	3	2	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	Grantham	3	3	3	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	Merritton	6	6	6	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	Louth	4	4	3	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	Port Dalhousie	4	4	4	....	....	....	1	....	....	....	....	....	....	....	....	1	....	....	1	1	1
	Clinton	1	1	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	Grimsby, Village	3	3	3	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	Niagara, Town	5	5	4	....	....	....	2	1	1	....	....	....	....	....	....	....	1	....	1	1	1
	Beamsville	2	3	2	....	....	....	1	1	1	....	....	....	....	....	....	....	....	....	1	....	1
LONDON.	London, City	47	48	49	....	....	....	24	22	22	2	2	1	1	....	....	....	....	....	....	....	....
EAST MIDDLESEX.	London, Township	25	23	25	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	North Dorchester	6	6	5	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	Westminster	18	18	18	....	....	....	....	1	1	....	....	....	....	....	....	....	....	....	....	....	....
	London East, Town	11	11	11	....	....	....	5	3	3	....	....	....	....	....	1	....	....	....	....	....	....
	West Nissouri	4	4	4	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....
	London West, Village, (formerly Petersville)	3	3	3	....	....	....	2	2	2	....	....	....	....	....	....	....	....	....	....	....	....

SCHEDULE C.—*Continued.*

Licensee Number.	Municipality	Licenses Transferred and Removed.		Total.		Amounts received for Provincial Licenses, Transfers, Removals and Fines in each Municipality.		Proportion thereof paid to Municipalities.		REMARKS.
		Transfers.	Removals.							
		1884.	1884.	1884.	1885.	1884.	1885.	1884.	1885.	

SCHEDULE C.—Comparative Statement by Municipalities, shewing the number of Provincial Licenses, etc.—*Continued.*

License District.	Municipality.	Tavern.						Shop.			Wholesale.			Extended Tavern.			Extended Shop.			Six Months.		
		Ordinary.			Beer and Wine.																	
		1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.
NORTH MIDDLESEX.	East Williams	3	3	3																		
	McGillivray	3	3	3																		
	Adelaide	3	2	2																		
	Biddulph	5	4	5																		
	Ailsa Craig	3	3	3				2	2	2												
	Lobo	4	4	4																		
	Parkhill	5	5	5				2	2	2												
	Lucan	4	4	4				2	1	1												
	West Williams																					
WEST MIDDLESEX.	Ekfrid	4	5	4			1															
	Strathroy	8	8	7			1	3	3	2												
	Wardsville	2	2				1							1								
	Metcalfe	4	4	4																		
	Delaware	2	2	2				1	1	1												
	Caradoc	6	6	6																		
	Glencoe	4	4	4					1	1												
	Mosa	1	1	1																		
	Newbury	2	2	2				1	1	1				1		1						
MONCK.	Wainfleet	3	3	1			1															
	Canborough	2	2	1	1	1	2															
	Caistor	3	3	1			1															
	Sherbrooke	1	1	1																		
	Dunnville	6	6	6				2	2	1										1	1	1
	Gainsborough	4	3	2																		
	Pelham																					

SCHEDULE C.—*Continued.*

London District.	Municipality.	Licenses Transferred and Removed.		Total.		Amounts received for Provincial Licenses, Transfers, Removals, and Fines in each Municipality.				Proportion thereof paid to Municipalities.				Remarks.
		Transfers.	Removals.											
		1883-4.	1884-5.	1885-6.	1886-7.	1883-4.	1884-5.	1885-6.	1886-7.	1883-4.	1884-5.	1885-6.	1886-7.	
						$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	
NORTH MIDDLESEX.	East Williams					180 00	216 00	324 00	384 00	76 50	91 80	137 70	163 20	
	Mt. Salubury					180 00	180 00	180 00	180 00	76 50	76 50	76 50	76 50	
	Adelaide					180 00	180 00	144 00	144 00	76 50	76 50	61 20	61 20	
	Biddulph					360 00	360 00	360 00	360 00	153 00	153 00	153 00	153 00	
	Arva Creek					45 00	72 00	72 00	72 00	19 12	30 60	30 60	30 60	
	Lobo					540 00	288 00	288 00	288 00	229 50	122 40	122 40	122 40	
	Delaware					540 00	360 00	360 00	360 00	229 50	153 00	153 00	153 00	
	London					900 00	900 00	900 00	900 00	382 50	382 50	382 50	382 50	
	West Williams					180 00	180 00	180 00	180 00	76 50	76 50	76 50	76 50	
WEST MIDDLESEX.	Egrid					311 00	381 00	324 00	384 00	132 17	161 84	137 70	163 20	
	Strathroy					1485 00	1870 00	1620 00	1920 00	631 12	794 75	688 50	816 00	
	Westminster					168 75	236 25	180 00	180 00	71 72	100 41	76 50	76 50	
	Mosa					360 00	360 00	360 00	360 00	153 00	153 00	153 00	153 00	
	Delaware					180 00	324 00	324 00	324 00	76 50	137 70	137 70	137 70	
	Carradoc					360 00	468 00	468 00	468 00	153 00	198 90	198 90	198 90	
	Ekfrid					360 00	648 00	648 00	648 00	153 00	275 40	275 40	275 40	
	Metcalfe					360 00	540 00	540 00	540 00	153 00	229 50	229 50	229 50	
	Mosa					180 00	360 00	360 00	360 00	76 50	153 00	153 00	153 00	
	Newbury					180 00	180 00	72 00	72 00	76 50	76 50	30 60	30 60	
MONCK.	Westminster					180 00	216 00	108 00	108 00	76 50	91 80	45 90	45 90	
	Dorchester					180 00	180 00	144 00	144 00	76 50	76 50	61 20	61 20	
	Caledon					180 00	216 00	144 00	72 00	76 50	91 80	61 20	30 60	
	Albemarle					45 00	72 00	72 00	72 00	19 12	30 60	30 60	30 60	
	Gainsborough					360 00	1080 00	720 00	720 00	153 00	459 00	306 00	306 00	
	Pelham					360 00	360 00	288 00	144 00	153 00	153 00	122 40	61 20	

SCHEDULE C.—Comparative Statement, by Municipalities, shewing the number of Provincial Licenses, etc.—*Continued.*

License District.	Municipality.	Tavern.						Shop.			Wholesale.			Extended Tavern.			Extended Shop.			ix Months.		
		Ordinary.			Beer and Wine.																	
		1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.
MUSKOKA AND PARRY SOUND.	Morrison	1	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	Bracebridge	4	4	4	....	....	....	2	2	1	....	....	....	....	....	....	....	....	....	....	....	....
	McKellar	1	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	Foley	2	2	....	1	....	....	1	1	....	....	....	....	....	....	....	....	....	....	....	....	....
	Stephenson	2	2	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	Wood and Medora	1	1	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	1	1	....
	Macaulay	3	3	3	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	Draper and Oakley	2	1	1	....	1	....	....	....	....	....	....	....	....	....	1 B&W	....	....	....	....	....	....
	Humphrey	3	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	1	....
	Gravenhurst	6	5	....	....	....	....	2	1	....	....	....	....	1	1	....	....	....	....	....	....	....
	Stisted	1	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	McDougall	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	McLean and Ridout	3	3	3	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	Armour	3	3	4	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	Chaffey	4	4	4	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	Strong	1	1	2	1	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	Chapman	2	2	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	Monck	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	Unorganized Territory	8	7	9	....	3	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
NIPISSING.	Mattawa	....	5	9	....	....	....	....	5	4	....	....	....	....	....	....	....	....	....	....	....	....
	Widdifield	....	....	5	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....
	Springer	....	....	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	Ferris	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	Unorganized Territory	8	....	6	1	....	....	5	....	....	....	....	....	....	....	....	....	....	....	....	....	....

SCHEDULE C.—*Continued.*

Licenses Issued.	Municipality.	Licenses Transferred and Renewed.		Total		Amounts received for Provincial Licenses, Transfers, Renewals, and Fines in each Municipality.			Proportion thereof paid to Municipalities.			Remarks.
		Transfers.	Renewals.									
		1883-4.	1883-4.	1883-4.	1886-7.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	
						$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	
METCALFE AND FALLEY SOUND.	Metcalfe	2		1	5	60 00	73 50	505 00	32 43	29 35	236 50	Dunkin Act in force.
	Osgoode	1		1	2	450 00	225 00	144 00	284 62	329 16	1 97	
	Gloucester					60 00	112 00		34 14	49 59		
	Nepean				2	120 00	216 00		105 32	85 72	56 93	
	Goulbourn					120 00	120 00	144 00	64 00	64 61		
	Marlborough				2	180 00	240 00	221 00	48 66	64 21	87 79	
	Huntley					120 00	120 00	81 00	57 31	103 50	81 47	
	Fitzroy				2	210 00	180 00		64 87	64 21		
	Torbolton					60 00	120 00		110 37	73 94	3 11	
	Stanley					60 00	60 00	77 00	274 36	339 69	30 87	
	McNab				3	60 00	60 00		32 43	39 68		
	Middleville and Lanark	3		4	8	180 00	264 00	256 00	10 50	110 89	107 39	
	Admaston	1		1	4	120 00	96 00	96 00	97 31	8 73	124 13	
	Clarendon				4	120 00	216 00	96 00	97 31	118 29	113 39	
	Grattan				4	120 00	228 00	288 00	162 14	118 29	113 39	
	Hinchinbrooke				4	120 00	108 00	144 00	47 21	44 37	63 47	
	Wakefield				3	120 00	156 00	144 00	64 87	61 62	59 34	
	Templeton					60 00	60 00	144 00	64 87	14 77		
	Unorganized Territory	1		3	12	465 00	762 00	1202 50				Payable to Province, less proportion of expenses.
NIPISSING.	Mattawa				14			1721 00		1249 86	1206 64	
	Widdifield				6		1739 00	817 00		73 73	568 74	
	Calvin				4		180 00	344 00			265 06	
	Ferris				1			232 00			113 88	
	Unorganized Territory	3		3	6	1165 00	112 00	432 00				Payable to Province, less proportion of expenses.

SCHEDULE C.—Comparative Statement by Municipalities, shewing the number of Provincial Licenses, etc.—*Continued.*

License District.	Municipality.	Tavern.						Shop.			Wholesale.			Extended Tavern.			Extended Shop.			Six Months.		
		Ordinary.			Beer and Wine.																	
		1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.
NORTH NORFOLK.	Middleton	9	8	....	....	....	....	1	1	....	....	....	....	....	....	....	....	....	....	....	....	....
	Simcoe	8	8	....	....	....	....	3	3	....	....	....	....	....	....	....	....	....	....	....	....	....
	Windham	9	7	....	1	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	Waterford	3	3	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	Townsend	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
SOUTH NORFOLK.	Walsingham	5	6	....	1	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	Woodhouse	1	1	....	1	1	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....
	Charlotteville	9	6	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....
	Houghton	3	3	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....
	Port Dover	4	4	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....
EAST NORTHUMBERLAND.	Seymour	3	3	3	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....
	Murray	2	3	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	Cramshé	2	2	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	Percy	4	4	3	....	....	....	1	1	1	....	....	....	....	....	....	....	....	....	....	....	....
	Colborne	4	4	4	....	....	....	1	1	1	....	....	....	....	....	....	....	....	....	....	....	....
	Campbellford	5	5	5	....	....	....	4	3	3	....	....	....	....	....	....	1	1	....	....	....	....
	Hastings	3	3	3	....	....	....	2	2	1	....	....	....	....	....	....	....	....	....	....	1	1
	Brighton, Village	4	4	4	....	....	....	1	1	1	....	....	....	....	....	....	....	....	....	....	....	....
WEST NORTHUMBERLAND.	Alnwick	....	2	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	1
	South Monaghan	1	1	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	Haldimand	4	3	3	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	Hamilton	7	6	7	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	Cobourg, Town	15	12	14	....	....	....	3	3	3	....	....	....	....	3	....	1	....	....	....	....	....

SCHEDULE C—*Continued.*

Licensed District.	Municipality.	Licenses Transferred and Removed.		Total.			Applications granted for Premises Licensed, Transferred, Removed, and Refused, in each Municipality						Petitions thereof paid to Municipalities.						Remarks.
		Transfers.	Removals.	1882-4.	1884-5.	1885-6.	1882-4.		1884-5.		1885-6.		1882-4.		1884-5.		1885-6.		
							Granted.	Refused.	Granted.	Refused.	Granted.	Refused.	Granted.	Refused.	Granted.	Refused.	Granted.	Refused.	
SOUTH MIDDLESEX.	Middlesex	2		2	1		71	4	63	4			313	12	195	12			South Act in force.
	Lobo						12		11				56		35				
	Williams	1		1			11		11				56		35				
	Westminster						11		11				56		35				
	Delaware						11		11				56		35				
	Lambton						11		11				56		35				
	Ekfrid						11		11				56		35				
	Mosa						11		11				56		35				
	Caradoc						11		11				56		35				
	Metcalfe						11		11				56		35				
	Adelaide						11		11				56		35				
	Warwick						11		11				56		35				
	Carradoc						11		11				56		35				
	Strathroy						11		11				56		35				
	Mosa						11		11				56		35				
	Ekfrid

SCHEDULE C.—Comparative Statement, by Municipalities, shewing the number of Provincial Licenses, etc.—*Continued.*

License District.	Municipality.	Tavern.						Shop.			Wholesale.			Extended Tavern.			Extended Shop.			Six Months.		
		Ordinary.			Beer and Wine.																	
		1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.
NORTH ONTARIO.	Reach	7	7	7				1														
	Uxbridge, Village	4	4	4				1	1	1												
	Brock	4	3	3	1	2	1															
	Mara	5	5	4				1	1	2												
	Thorah	3	3	1				2	2													
	Port Perry	5	3	5				1	1	1												
	Uxbridge, Township	5	5	5																		
	Scott	3	3	4																		
	Rama	3	3	3				1	1	1												
	Cannington	3	3	2				2	2	2												
	Beaverton			2						2												
SOUTH ONTARIO.	Oshawa	6	6	6				1	1	1												
	Whitby, Town	7	7	7	1			2	2	2												
	Whitby, Township	3	3	2																		
	Whitby, East, Township	3	3	3																		
	Pickering	9	8	8																		
OTTAWA.	Ottawa, City	75	75	75				84	78	77									1	1	1	1
NORTH OXFORD.	East Nissouri	2	2																			
	Blandford	2	2																			
	East Zorra	4	4					1	1													
	Embro	2	2																			
	West Zorra	3	1																			
	Woodstock	13	12					3	3													
	Blenheim	11	8																			

SCHEDULE C.—*Continued.*

Licensed Districts.	Municipalities.	Licenses Transferred and Removed.			Total			Amount received for Provincial Licenses, Transfers, Removals and Fines in each Municipality.			Proportion thereof paid to Municipalities.			Remarks.
		Transfers.		Removals.										
		1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	
								$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	
NORTH OXFORD.	Embro							86 31	81 86		257 23	267 13	199 21	Canada Temperance Act in force.
	Beachville							61 73	61 39		370 79	356 98	387 79	
	Ingersoll							164 54	163 72		132 38	118 04	121 31	
	West Zorra							144 73	151 19		192 94	187 57	190 35	
	Woodstock				97 10	46 98					242 47	237 63	85 72	
	Dereham				1232 15	1115 11					748 64	789 71	780 75	
					481 54	266 81					169 47	171 00	145 30	
OTTA WA.	Ottawa, City				2	1		13815 82	14209 52	13501 93	128 63	126 75	112 39	
											270 79	309 35	292 64	
SOUTH ONTARIO.	Pickering										823 91	872 18	854 33	
	Whitby, Town										812 32	786 86	777 39	
	Whitby, Township										228 19	218 76	118 35	
	Whitby, Township										140 69	113 01	103 77	
	Pickering										486 57	422 67	469 57	
											1105 00	1046 00	1070 00	
											1240 00	1435 00	1370 00	
											366 00	400 00	231 00	
											270 00	216 00	189 00	
											750 00	766 00	866 00	
NORTH ONTARIO.	Lancaster										190 00	184 00	170 00	
	Lancaster, Village										120 00	144 00	150 00	
	Cornwall, Town										305 00	280 00	295 00	
	Cornwall, Township										180 00	264 00	180 00	
	Cornwall, Township										180 00	92 00	180 00	
	Cornwall, Township										1026 00	1260 00	1026 00	
	Finch										90 00	90 00	90 00	
	Roxborough										90 00	90 00	90 00	
	Osnabruck										90 00	90 00	90 00	
	Williamsburg										90 00	90 00	90 00	
	Matilda										90 00	90 00	90 00	
	Mountain										90 00	90 00	90 00	
	Winchester										90 00	90 00	90 00	
	Edwardsburg										90 00	90 00	90 00	
	Augusta										90 00	90 00	90 00	
	Edwardsburg										90 00	90 00	90 00	
	Cornwall										90 00	90 00	90 00	
	Lancaster										90 00	90 00	90 00	
	Roxborough										90 00	90 00	90 00	
	Finch										90 00	90 00	90 00	
	Cornwall

SCHEDULE C.—Comparative Statement by Municipalities, showing the Number of Provincial Licenses, etc.—*Continued.*

License Districts.	Municipality.	Tavern.			Shop.			Wholesale.			Extended Tavern.			Extended Shop.			Six Months.		
		Ordinary.																	
		1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.
SOUTH OXFORD.	Ingersoll	12	8		4	3					1	3							
	Tilsonburg	6	5		2	1													
	Norwich, Village	4	4																
	North Oxford	3	3								2								
	South Norwich	2	1																
	Dereham	1	1																
	West Oxford	3	4																
	East Oxford	1	1																
		1	1																
PEEL.	Brampton	6	6	6	2	2	2												
	Chinguacousy	11	11	11															
	Toronto	13	13	13	1												1	1	1
	Toronto Gore	4	4	4	1	1	1												
	Streetsville	2	2	2	1	1	1												
NORTH PERTH.	Mornington	13	11	10	1	1													
	Ellice	7	7	7	1														
	Wallace	3	2	3															
	Elma	5	5	4															
	Logan	2	2	2															
	Listowel	8	6	7	1	1	2												
	Smithville	22	22	21	1	7	1												
	North Easthope	4	4	4	9														
	Milverton	3	2	3															

SCHEDULE C.—(*Continued.*)

Municipality.	Leases Transferred and Removed.			Total.			Amounts received for Property Leases, Transfers, Removals and Fines in each Municipality.			Proportion thereof paid to Municipalities.			Remarks.
	Transfers.		Removals.										Can. Temp. Act in force.
	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	
							$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	
Montreal	9	14	1	16	15	11	2610 60	2677 60	1065 00	1346 31	1624 42	439 47	
Quebec	2	1	1	5	6	4	758 76	944 63	814 00	489 63	820 97	361 93	
Toronto	1	1		3	4	2	330 00	330 00	852 00	116 33	194 40	384 27	
Hamilton				2	2	1	150 00	216 00	360 00	114 09	114 62	127 30	
Ottawa				2	2	1	147 00	324 00	345 00	58 25	91 54	123 30	
St. John				1	1		150 00	150 00		134 49	162 96		
Kingston				1	1		66 00	66 00		87 30	126 16	152	
London					1			72 00		39 13	96 36	44	
Victoria, B.C.										39 13	31 64	100 38	
Winnipeg													
Charlottetown													
St. Johns, Nfld.													
Fredericton													
Regina													
Prince Albert													
Calgary													
Moosejaw													
Edmonton													
Battleford													
Qu'Appelle													
Prince Albert													
Medicine Hat													
Maple Creek													
Swift Current													
Yorkton													
Whitewood													
Moosomin													
Wolseley													
Broadview													
Portage la Prairie													
Rapid City													
Brandon													
Virden													
Minnedosa													
Rat Portage													
Emerson													
Selkirk													
Gretna													
Carberry													
Morden													
Manitou													
Pilot Mound													
Deloraine													
Souris													
Treherne													
Holland													
Cartwright													
Portage la Prairie													
Rapid City													
Brandon													
Virden													
Minnedosa													
Rat Portage													
Emerson													
Selkirk													
Gretna													
Carberry													
Morden													
Manitou													
Pilot Mound													
Deloraine													
Souris													
Treherne													
Holland													
Cartwright													

SCHEDULE C.—Comparative Statement, by Municipalities, shewing the number of Provincial Licenses, etc.—*Continued.*

License District.	Municipality.	Tavern.						Shop.						Wholesale.						Extended Tavern.						Extended Shop.						Six Months.			
		Ordinary.			Beer and Wine.																														
		1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.
SOUTH PERTH.	South Easthope	6	6	5																															
	Fullarton	3	3	3																															
	Mitchell	7	7	6					2	2																									
	Hibbert	5	5	2				2	2	1																									
	Downie	6	7	4				1	1																										
	St. Marys	10	10	9				2	2	2																									
	Blanchard	5	3	3																															
EAST PETERBOROUGH.	Ashburnham	3	3	3				3	3	3												1													
	Asphodel	1	2	1																															
	Dummer	2	2	1																															
	Otonabee	5	4	5																															
	Burleigh, Anstruther and Chandos	4	3	2				1	1																										
	Norwood	3	3	2																														1	
	Belmont and Methuen	2	3	3				1	1	1												1													
	Douro	2	2	1																															
WEST PETERBORO'.	Smith	3	3	3																															
	Lakefield	4	4	4																															
	Peterborough	21	18	18				10	9	8																								1	
	North Monaghan																																		
	Ennismore																																		

SCHEDULE C.—*Continued.*

Licensed District.	Municipality.	Licenses Transferred and Removed.				Total.			Amounts received for Provincial Licenses, Transfers, Removals and Fines in each Municipality.				Proportion thereof paid to Municipalities.				Remarks.
		Transfers.			Removals.												
		1884.	1885.	1886.	1884.	1885.	1886.	1887.	1884.	1885.	1886.	1887.	1884.	1885.	1886.	1887.	
									$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	
SOUTH EASTH.	Cook, Eastern	1							360 00	467 00	405 00	182 14					
	Cook, Western								180 00	241 00	216 00	95 04					
	Mayne								960 00	1160 00	1080 00	508 46					
	Pender								360 00	432 00	216 00	110 88					
	Prevost								360 00	547 25	360 00	168 94					
	S. Marys								1710 00	1830 00	1836 00	1013 24					
	Excelsior								360 00	216 00	216 00	95 04					
EAST FALSE BOBOYOH.	Admiralty	1			1				560 00	665 00	665 00	334 03					
	Angelo								60 00	90 00	90 00	31 65					
	Edwards								140 00	144 00	72 00	25 33					
	Grenville								300 00	368 00	360 00	127 11					
	Hardwicke, Vancouver and Quadra								280 00	169 00	180 00	63 30					
	Quatsino								320 00	390 00	405 00	223 63					
	Valdes				1				120 00	221 00	216 00	75 97					
	Denman and Hornby								120 00	164 00	153 00	48 51					
	Texada																
FALSE BOBOYOH.	South	1							256 00	276 00	276 00	133 13					
	Lasqueti								380 00	385 00	420 00	215 32					
	North Minstrels								5465 00	6665 00	6109 00	4292 64					
	Lasqueti																

SCHEDULE C.—Comparative Statement by Municipalities, shewing the number of Provincial Licenses, etc.—*Continued.*

License District.	Municipality.	Tavern. Ordinary.			Tavern. Beer and Wine.			Shop.			Wholesale.			Extended Tavern.			Extended Shop.			Six Months.		
		1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.
PRESCOTT.	South Plantagenet	7	7	7																		
	East Hawkesbury	6	5	7				1	1													
	Longueuil	2	2	2																		
	North Plantagenet	9	10	11				3	2	2												2
	Caledonia	3	4	3																		
	Alfred	5	5	5				1														
	West Hawkesbury	4	4	4				1	1	1												
	Hawkesbury, Village	3	3	3																		
	L'Orignal	3	3	3				1														
PRINCE EDWARD.	Picton	7	7	6*				3	2	2								1				1
	South Marysburgh	3	2	2																		
	Wellington	2	2	2				1														1
	Sophiasburgh	2	2	3																		
	Hillier	3	3	3																		
	Ameliasburgh	6	5	6																1	1	1
	Hallowell																					1
	North Marysburgh			1																		
NORTH RENFREW.	Bromley	2	2					3	1													
	Pembroke	9	8					6	6													
	Ross	2	1					1	1													
	Westmeath	6	6																			
	Wilberforce	3	1					1														
	Head, Maria and Clara	3	4					2	2								•					
	Petawawa	1	1																			
	Rolph, Buchanan & Wylie	1																				
	Wilberforce and North Algoma		1						1													

* Including two (2) vessels.

SCHEDULE C.—Continued.

License District.	Municipality	Licenses Transferred and Removed.			Total.			Amount required to be Deposited by Tenants, Removals and Fines in each Municipality.			Proportion thereof paid to Municipalities.			Remarks.
		Transfers.		Removals.										
		1884.	1885.	1886.	1884.	1885.	1886.	1884.	1885.	1886.	1884.	1885.	1886.	
NORTH HASTINGS.	Hastings													Can. Temp. Act in force.
	Grafton													
	Percy													
	Seymour													
	Murray													
	Brighton													
	Cramahe													
	Haldimand													
	Alnwick													
	Monaghan													
	Belleville													
	Township of Sidney													
	Township of Thurlow													
	Township of Tyendinaga													
	Township of Huntingdon													
	Township of Rawdon													
	Township of Madoc													
	Township of Elzevir													
	Township of Marmora													
	Township of Hungerford													
	Township of Tudor and Cashel													
	Township of Lake													
	Township of Herschel													
	Township of Carlow and Mayo													
	Township of Wollaston													
	Township of Dungannon													
	Township of Limerick													
	Township of Faraday													
	Township of Bangor													
	Township of Wicklow													
	Township of Dungannon & Wollaston and Nash													
	Township of Algoma													
DESERONTO.	Deseronto													
	Township of Tyendinaga													
	Township of Marysburgh													
	Township of Wellington													
	Township of Hillier													
	Township of Ameliasburgh													
	Township of Sophiasburgh													
	Township of Hallowell													
	Township of Athol													
	Township of Picton													
	Township of Ernestown													
	Township of Fredericksburgh													
	Township of Adolphustown													
	Township of Richmond													
	Township of Sidney													
	Township of Thurlow													
	Township of Huntingdon													
	Township of Rawdon													
	Township of Madoc													
	Township of Elzevir													
	Township of Marmora													
	Township of Hungerford													
	Township of Tudor and Cashel													
	Township of Lake													
	Township of Herschel													
	Township of Carlow and Mayo													
	Township of Wollaston													
	Township of Dungannon													
	Township of Limerick													
	Township of Faraday													
	Township of Bangor													
	Township of Wicklow													
	Township of Dungannon & Wollaston and Nash													
	Township of Algoma													
FRONTENAC.	Kingston													
	Township of Pittsburgh													
	Township of Ernestown													
	Township of Kingston													
	Township of Portsmouth													
	Township of Frontenac													
	Township of Loughborough													
	Township of Bedford													
	Township of Storrington													
	Township of Kingston													
	Township of Portsmouth													
	Township of Frontenac													
	Township of Loughborough													
	Township of Bedford													
	Township of Storrington													

SCHEDULE C.—Comparative Statement by Municipalities, shewing the number of Provincial Licenses, etc.—*Continued.*

License District.	Municipality.	Tavern.						Shop.			Wholesale.			Extended Tavern.			Extended Shop.			Six Months.		
		Ordinary.			Beer and Wine.																	
		1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.
SOUTH RENFREW.	McNab	4	3	....	3	2	....	1	....	....	....	....	....	....	1	....	....	....	....	....	....	....
	Renfrew	6	5	....	....	....	....	5	4	....	....	....	....	....	....	....	....	....	....	....	....	....
	Grattan	4	2	....	....	....	....	4	2	....	....	....	....	....	1	....	....	1	....	....	....	....
	Brougham	....	....	....	....	....	....	1	1	....	....	....	....	....	....	....	....	....	....	....	....	....
	Brudenell	2	....	....	....	....	....	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	Arnprior	7	6	....	....	....	....	2	2	....	....	....	....	....	....	....	....	....	....	....	....	....
	Radcliffe and Gaglan	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	Hagarty, Sherwood and Jones	2	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	Griffith and Matawatchan	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	Bagot and Blithfield	4	1	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	Admaston	1	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	Horton	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	Jones	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	Hagarty	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
RUSSELL.	Cambridge	4	5	5	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	Russell	5	5	5	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	Clarence	6	5	6	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	Gloucester	11	11	9	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	Cumberland	4	5	5	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	Osgoode	6	6	6	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	New Edinburgh	1	1	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
EAST SIMCOE.	Tiny	3	3	....	....	....	....	1	1	....	....	....	....	....	....	....	....	....	....	....	....	....
	Orillia and Matchedash	3	3	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	Oro	4	5	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	Tay	2	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	Medonte	10	9	....	....	1	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....
	Penetanguishene	4	4	....	....	....	....	1	1	....	....	....	....	....	....	....	....	....	....	....	....	....
	Orillia, Town	7	7	....	....	....	....	1	1	....	....	....	....	....	....	....	....	....	....	....	....	....
	Midland	5	5	....	....	....	....	1	1	....	....	....	....	....	....	....	....	....	....	....	....	....

SCHEDULE U.—*Continued*

Licensed Districts.	Municipalities	Licenses Transferred and Removed			Total			Amounts received for Original Licenses, Transfers, Renewals and Fines in each Municipality.			Proportion thereof paid to Municipalities.			Remarks.
		Transfers.		Removals.										
		1884.	1885.	1886.	1884.	1885.	1886.	1884.	1885.	1886.	1884.	1885.	1886.	
								$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	
SOUTH HASTINGS.	McCabe	1						46 00	46 00		46 00	46 00		
	Hamilton							46 00	46 00		46 00	46 00		
	Grimsby							46 00	46 00		46 00	46 00		
	Thorold							46 00	46 00		46 00	46 00		
	Arnstein							46 00	46 00		46 00	46 00		
	Arnside and Hagar							46 00	46 00		46 00	46 00		
	Hungerford, Glanford and Ancaster							46 00	46 00		46 00	46 00		
	Brantford and Mohawk							46 00	46 00		46 00	46 00		
	Burford and Oakland							46 00	46 00		46 00	46 00		
	Ashgrove							46 00	46 00		46 00	46 00		
	Burtch							46 00	46 00		46 00	46 00		
	Hespeler							46 00	46 00		46 00	46 00		
	Preston							46 00	46 00		46 00	46 00		
	Berlin							46 00	46 00		46 00	46 00		
	Waterloo							46 00	46 00		46 00	46 00		
	Galt							46 00	46 00		46 00	46 00		
	Dumfries							46 00	46 00		46 00	46 00		
	Blenheim							46 00	46 00		46 00	46 00		
	Paris							46 00	46 00		46 00	46 00		
	Brantford							46 00	46 00		46 00	46 00		
	Onondaga							46 00	46 00		46 00	46 00		
	Tuscarora							46 00	46 00		46 00	46 00		
	Seneca

SCHEDULE C.—Comparative Statement by Municipalities, shewing the number of Provincial Licenses, etc.— *Continued.*

License District.	Municipality.	Tavern.						Shop.			Wholesale.			Extended Tavern.			Extended Shop.			Six Months.		
		Ordinary.			Beer and Wine.																	
		1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.
SOUTH SIMCOE.	Essa	9	7	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	Innisfil	9	8	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	West Gwillimbury	4	3	....	....	....	....	1	1	....	....	....	....	....	....	....	....	....	....	....	....	....
	Tosorontio	5	5	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	Alliston	4	4	....	....	....	....	2	2	....	....	....	....	....	....	....	....	....	....	....	....	....
	Bradford	4	3	....	....	....	....	2	2	....	....	....	....	....	....	....	....	....	....	....	....	....
WEST SIMCOE.	Barrie	12	12	....	....	....	....	5	5	....	....	....	....	....	....	....	....	....	....	....	....	....
	Nottawasaga	15	13	....	....	....	....	2	1	....	....	....	....	....	....	....	....	....	....	....	....	....
	Stayner	5	4	....	....	....	....	2	2	....	....	....	....	....	....	....	....	....	....	....	1	....
	Collingwood, Town	9	9	....	....	....	....	3	3	....	....	....	....	....	....	....	....	....	....	....	....	....
	Vespra	3	3	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	Sunnidale	3	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	Floss	6	6	....	....	....	....	1	1	....	....	....	....	....	....	....	....	....	....	....	....	....
STORMONT.	Osnabruck	11	10	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	Finch	4	4	....	....	....	....	2	1	....	....	....	....	....	....	....	....	....	....	....	....	....
	Roxborough	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
THUNDR BAY, WST	Rat Portage	....	....	6	....	....	....	....	....	1	....	....	....	....	....	1	....	....	1	....	....	1
	Shuniah	23	....	....	1	....	....	4	....	....	1	....	....	....	....	....	....	....	....	....	....	....
	Neebing	5	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	Unorganized Territory	4	....	3	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
THUNDR BAY, EST	Shuniah	....	35	....	....	1	....	....	6	....	....	2	....	....	1	....	....	....	1	....	....	....
	Neebing	....	10	9	....	....	....	....	2	1	....	....	....	....	....	....	....	....	....	....	....	....
	Unorganized Territory	....	....	1	....	....	....	....	1	....	....	....	....	....	2	....	....	....	....	....	....	....
	Port Arthur	....	....	15	....	....	....	....	....	6	....	....	1	....	....	10	....	....	....	....	....	1

SCHEDULE C—*Continued.*

Licensed District.	Municipality	Licenses Transferred and Removed			Total.			Amounts received for Provincial Licenses, Transfers, Removals and Fines in each Municipality.			Proportion thereof paid to Municipalities.			REMARKS.
		Transfers.		Removals.										
		1883.	1884.	1885.	1883.	1884.	1885.	1883.	1884.	1885.	1883.	1884.	1885.	
SOUTH SIMCOE	Essa													Canada Temperance Act in force.
	Innisfil													
	West Gwillimbury													
	Tecumseth													
	Adjala													
	Bradford	1			1									
WEST SIMCOE	Barrie													Canada Temperance Act in force.
	Nottawasaga													
	Sunnidale													
	Collingwood, Tps.													
	Vespra													
	Innisfil													
	Flos	1			1									
STOCKMONT	Oro													Canada Temperance Act in force.
	Medonte													
	Rama	1			1									
THUNDER BAY, EAST.	Shuniah													
	Neebing													
	Thunder Bay													
	Unorganized Territory													
	Fort Arthur													
	Total	3	1		4	1		17 8			1887 56			
Licensed Victuallers														
Tavern Keepers														
Shopkeepers														
Total														

SCHEDULE C.—Comparative Statement, by Municipalities, shewing the number of Provincial Licenses, etc.—*Continued.*

License District.	Municipality.	Tavern.			Shop.			Wholesale.			Extended Tavern.			Extended Shop.			Six Months.		
		Ordinary.			Beer and Wine.														
		1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.
NORTH VICTORIA AND HALIBURTON.	Eldon	10	8	7															
	Fenelon	5	4	4															
	Fenelon Falls	4	3	3															
	Bexley	2	2	2															
	Laxton and Digby	2	1	1															
	Somerville	3	3	1															
	Anson	1	1	1															
	Minden	2	2	2															
	Snowdon	1	1	1															
	Dysart	2	2	2															
	Glamorgan	1	1	1															
	Sherborne	1																	
	Dalton																		
	Carden and Dalton			1															
	Woodville, Village		3	3															
TORONTO.	Toronto, City	197	217	227			71	98	88	71	14	13 & 1 Extd.	14*	3	5	2	1 B. & W.		
									1 Wholesale.										
THUNDER BAY, WEST.	Rat Portage		1	6			2						1			1			1
	Unorganized Territory		3	3															

† Two vessel also issued. * Dominion issue.

SCHEDULE C.—*Continued*

License District.	Municipality	Licenses Transferred and Renewed.			Total			Amounts received for Provincial Licenses, Transfers, Renewals, and Fines in each Municipality.			Proportion thereof paid to Municipalities.			Payable to Province, less proportion of expenses.			Remarks.
		Transfers.		Renewals.													
		1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	
NORTH VICTORIA AND HALIBURTON.								c.	c.	c.	c.	c.	c.				
								$	$	$	$	$	$				
	Bobcaygeon							92 15	92 15	92 15	92 15	92 15	92 15				
	Fenelon Falls							64	64	64	64	64	64				
	Lindsay							111	111	111	111	111	111				
	Bexley							20	20	20	20	20	20				
	Dalton and Digby							6	6	6	6	6	6				
	Eldon							3	3	3	3	3	3				
	Fenelon							3	3	3	3	3	3				
	Mariposa							8	8	8	8	8	8				
	Somerville							8	8	8	8	8	8				
	Verulam							5	5	5	5	5	5				
	Ops							5	5	5	5	5	5				
	Oakwood							5	5	5	5	5	5				
	Dalton							5	5	5	5	5	5				
	Carden and Dalton							5	5	5	5	5	5				
	Woodville, Village							5	5	5	5	5	5				
TORONTO.	Toronto—City				33	39	39	1882 50	2701 50	3472 50	1271 00	1579 00	1793 00	611 50	1122 50	1679 50	
THUNDER BAY, MUSK.	Rat Portage (Lonsdale and Tennessy)		1			1			155 00	185 70		65 90			89 10		
									166 30	281 00							

SCHEDULE C.—Comparative Statement, by Municipalities, shewing the number of Provincial Licenses, etc.—*Continued.*

License District.	Municipality.	Tavern.						Shop.			Wholesale.			Extended Tavern.			Extended Shop.			Six Months.		
		Ordinary.			Beer and Wine.																	
		1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.
SOUTH VICTORIA.	Lindsay	14	14	13				2	2	2												
	Mariposa	6	5	5																		
	Emily																					
	Verulam	1	1	1																		
	Bobcaygeon	3	3	3																1		
	Omemee	3	3	3				1	1	1				1								
NORTH WATERLOO.	Waterloo, T'nship, N. pt.	7	7	7																		
	Woolwich	11	11	10				1	1	1												
	Wellesley	14	14	14				1	1	1				1	1							
	Berlin	9	9	9				4	5	5	1											
	Waterloo, Town	6	6	6				1	1	1												
SOUTH WATERLOO.	Galt	9	9	9	1	1		4	4	2						1 B&W			1			
	Preston	5	5	5		1		1		1												
	Wilmot	13	13	14				1														
	Waterloo, T'nship, S. pt.	5	5	5																		
	Hespeler	3	3	3																		
	North Dumfries	4	2	2																		
	New Hamburgh	4	4	4				2	2	2						1						
	Ayr, Village		2	2																		

SCHEDULE C.—*Continued.*

License District.	Municipality.	Licenses Transferred and Removed.						Total.			Amounts received for Provincial Licenses, Transfers, Removals, and Fines in each Municipality.			Proportion thereof paid to Municipalities.			Remarks.
		Transfers.			Removals.												
		1884.	1885.	1886.	1884.	1885.	1886.	1884.	1885.	1886.	1884.	1885.	1886.	1884.	1885.	1886.	
											$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	
SOUTH VICTORIA	Lanark	4	3					20	19	15	2660 00	3115 00	2900 15	1952 79	1919 45	1740 59	
	Marlboro	2						8	5	5	370 00	360 00	420 00	180 39	141 58	154 19	
	Enville										70 00						
	Veryden							1	1	1	60 00	72 00	72 00	29 26	28 31	25 74	
	Rohaatygeon							4	3	3	370 00	360 00	360 00	252 13	204 93	197 08	
	Onslow	1						6	4	4	567 50	610 00	610 00	434 25	403 24	392 77	
NORTH WATERLOO	Waterloo, Township, N. part	1		1				8	7	8	425 00	504 00	529 00	240 02	235 02	247 95	
	Wellesley	1						16	12	11	840 00	924 00	877 00	474 37	435 77	414 35	
	Wellesley	1	1					17	17	15	940 00	1143 00	1212 00	530 82	536 31	574 28	
	Berlin	1	1					15	15	14	1390 00	1723 00	1750 00	866 17	808 53	819 92	
	Waterloo, Town		1					7	8	7	700 00	915 00	938 00	447 55	446 81	458 31	
SOUTH WATERLOO	Galt							14	14	13	1750 00	2095 00	1731 25	1224 16	1188 57	968 90	
	Preston							6	6	6	480 00	600 00	600 00	316 83	315 89	313 42	
	Wilmot							14	13	14	900 00	936 00	1008 00	492 01	424 43	451 31	
	Waterloo, Township S. part							5	5	5	340 00	380 00	382 00	185 87	174 12	173 01	
	Hespeler							3	3	3	200 00	260 00	240 00	109 35	108 83	96 71	
	North Dumfries							4	3	3	320 00	484 00	484 00	211 21	105 32	104 47	
	New Hamburg							6	5	7	540 00	560 00	695 00	331 67	275 89	297 21	
	Ayr Village								2	2		200 00	200 00		105 30	104 47	

SCHEDULE C—Comparative Statement by Municipalities, shewing the number of Provincial Licenses, etc.—*Continued.*

License District.	Municipality.	Tavern.						Shop.			Wholesale.			Extended Tavern.			Extended Shop.			Six Months.		
		Ordinary.			Beer and Wine.																	
		1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.
WELLAND.	Niagara Falls, Town, (formerly Clifton)	14	14	15	1	1	....	4	5	5	.....	...	.....	1	.....	.....	2	.....	.....	1	1	1
	Crowland	3	3	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Chippewa	2	2	2	.....	.....	.....	2	1	2	.....	.....	.....	1	.....	.....	.....	.....	.....	1	1	1
	Fort Erie	3	3	3	.....	.....	.....	1	1	.....	.....	.....	.....	.....	.....	1	.....	.....	1	1	1	1
	Port Colborne	5	5	5	.....	.....	.....	3	2	3	.....	.....	.....	1	.....	1	.....	.....	.....	1	1	1
	Humberstone	7	11	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	1	1	1
	Stamford	3	4	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	1
	Thorold, Township	4	4	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Thorold, Town	7	7	7	.....	.....	.....	1	1	1	.....	.....	.....	.....	.....	1	.....	.....	.....	1	1	1
	Welland	7	7	7	1	.....	.....	4	3	3	.....	.....	.....	1	1	.....	.....	.....	.....	.....	1	1
	Willoughby	3	3	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Bertie	13	13	13	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Niagara Falls, South, Vil.	3	3	3	.....	.....	.....	1	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	1
CENTRE WELLINGTON.	Pilkington	2	2	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Elora	5	5	5	.....	.....	.....	2	2	1	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....
	Nichol	7	7	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....
	Fergus	6	6	6	.....	.....	.....	2	2	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	West Garafraxa	3	3	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Erin, Township	5	5	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	East Luther	2	2	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	West Luther	2	2	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Erin, Village	3	3	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
SOUTH WELLINGTON.	Eramosa	9	9	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Guelph, Township	4	4	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Puslinch	5	5	5	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Guelph City	18	18	18	.....	.....	.....	8	8	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

SCHEDULE C — *Continued.*

Licensed District.	Municipalities.	Licenses Transferred and Removed.			Total.			Amounts received for Provincial Licenses, Transfers, Removals and Fines in each Municipality.			Proportion thereof paid to Municipalities.			Remarks.
		Transfers.		Removals.										
		1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	
								$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	
SOUTH WELLINGTON.	Fergus	—	—		15	15	15	945 00	945 00	945 00	315 82	315 82	315 82	
	Elora	—	—		15	15	15	945 00	945 00	945 00	315 82	315 82	315 82	
	Guelph, Township	—	—		15	15	15	945 00	945 00	945 00	315 82	315 82	315 82	
	Guelph, City	—	—		15	15	15	945 00	945 00	945 00	315 82	315 82	315 82	
CENTRE WELLINGTON.	Fergus	—	—		4	4	4	240 00	240 00	240 00	80 16	80 16	80 16	
	Elora	—	—		4	4	4	240 00	240 00	240 00	80 16	80 16	80 16	
	West Garafraxa	—	—		4	4	4	240 00	240 00	240 00	80 16	80 16	80 16	
	East Garafraxa	—	—		4	4	4	240 00	240 00	240 00	80 16	80 16	80 16	
	Erin, Township	—	—		4	4	4	240 00	240 00	240 00	80 16	80 16	80 16	
	Erin, Village	—	—		4	4	4	240 00	240 00	240 00	80 16	80 16	80 16	
	Eden, Township	—	—		4	4	4	240 00	240 00	240 00	80 16	80 16	80 16	
	Eden, Village	—	—		4	4	4	240 00	240 00	240 00	80 16	80 16	80 16	
WELLAND.	Niagara Falls, Town, (for merly Clifton)	1	—		5	5	5	297 00	297 00	297 00	99 22	99 22	99 22	
	Crowland	—	—		4	4	4	240 00	240 00	240 00	80 16	80 16	80 16	
	Chippawa	—	—		4	4	4	240 00	240 00	240 00	80 16	80 16	80 16	
	Port Colborne	—	—		4	4	4	240 00	240 00	240 00	80 16	80 16	80 16	
	Humberstone	—	—		4	4	4	240 00	240 00	240 00	80 16	80 16	80 16	
	Thorold, Township	—	—		4	4	4	240 00	240 00	240 00	80 16	80 16	80 16	
	Thorold, Town	—	—		4	4	4	240 00	240 00	240 00	80 16	80 16	80 16	
	Welland	—	—		4	4	4	240 00	240 00	240 00	80 16	80 16	80 16	
	Wellandville	—	—		4	4	4	240 00	240 00	240 00	80 16	80 16	80 16	
	Niagara Falls, South, Village	1	—		5	5	5	297 00	297 00	297 00	99 22	99 22	99 22	

SCHEDULE C. Comparative Statement, by Municipalities, shewing the number of Provincial Licenses, etc.—*Continued.*

License District.	Municipality.	Tavern.			Shop.			Wholesale.			Extended Tavern.			Extended Shop.			Six Months.		
		Ordinary.		Beer and Wine.															
		1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.
WEST WELLINGTON.	Mount Forest	7	7	7	3	3	2												
	Clifford	4	3	3	1	1	1												
	Arthur, Village	5	5	5	2	2	1				2								
	Harriston	5	5	5	1	1													
	Drayton	3	3	3	2										1				
	Palmerston	8	6	6	1														
	Arthur, Township	3	2	1															
	Maryborough	8	6	4															
	Minto	2	1	1															
	Peel	8	7	7															
NORTH WEST.	Dundas	9	9	9	4	4	4												
	Beverley	6	6	6															
	West Flamborough	9	9	9							....								
	East Flamborough	3	4	4															
	Waterdown	2	2	2															
	E. or W. Flamborough	1																	
SOUTH WEST.	Binbrook	2	3	3							1								
	Ancaster	4	4	4	2	2	2												
	Saltfleet	7	7	7															
	Barton	6	7	7															
	Glanford	3	3	3															
EAST YORK.	Scarborough	7	6	6			1												
	Markham, Township	10	11	8															
	York, East of Yonge St.	16	11		5	1	1												
	Markham, Village	3	3	3															
	Yorkville, Village																		
	City of Toronto (St. Paul's Ward, formerly Yorkville)	7	6		2	1													

SCHEDULE C.—*Continued.*

Licensed District.	Municipality.	Licenses Transferred and Renewed.		Total.			Amounts received for Provincial Licenses, Transfers, Renewals, and Fines in each Municipality.				Proportion thereof paid to Municipalities.				REMARKS.
		Transfers.	Renewals.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.		1883-4.	1884-5.	1885-6.		
EAST YORK	Scarborough			1	1	1	145 00	316 00	255 00	c.	43 50	94 80	76 50	c.	
							435 00	948 00	765 00	%	30	30	30	%	
	Markham			1	1	1	435 00	948 00	765 00	c.	165 00	357 00	289 00	c.	
							615 00	1344 00	1105 00	%	38	38	38	%	
	Vaughan			1	1	1	435 00	948 00	765 00	c.	130 50	284 40	229 50	c.	
							615 00	1344 00	1105 00	%	30	30	30	%	
	Whitchurch			1	1	1	435 00	948 00	765 00	c.	165 00	357 00	289 00	c.	
							615 00	1344 00	1105 00	%	38	38	38	%	
	Georgina			1	1	1	435 00	948 00	765 00	c.	165 00	357 00	289 00	c.	
							615 00	1344 00	1105 00	%	38	38	38	%	
	Uxbridge			1	1	1	435 00	948 00	765 00	c.	165 00	357 00	289 00	c.	
							615 00	1344 00	1105 00	%	38	38	38	%	
	Reach			1	1	1	435 00	948 00	765 00	c.	165 00	357 00	289 00	c.	
							615 00	1344 00	1105 00	%	38	38	38	%	
	Scott			1	1	1	435 00	948 00	765 00	c.	165 00	357 00	289 00	c.	
							615 00	1344 00	1105 00	%	38	38	38	%	
	Brock			1	1	1	435 00	948 00	765 00	c.	165 00	357 00	289 00	c.	
							615 00	1344 00	1105 00	%	38	38	38	%	
	Thorah			1	1	1	435 00	948 00	765 00	c.	165 00	357 00	289 00	c.	
							615 00	1344 00	1105 00	%	38	38	38	%	
	Mara			1	1	1	435 00	948 00	765 00	c.	165 00	357 00	289 00	c.	
							615 00	1344 00	1105 00	%	38	38	38	%	
	Rama			1	1	1	435 00	948 00	765 00	c.	165 00	357 00	289 00	c.	
							615 00	1344 00	1105 00	%	38	38	38	%	
	Ongwa Township			1	1	1	435 00	948 00	765 00	c.	165 00	357 00	289 00	c.	
							615 00	1344 00	1105 00	%	38	38	38	%	
	Ongwa Gore			1	1	1	435 00	948 00	765 00	c.	165 00	357 00	289 00	c.	
							615 00	1344 00	1105 00	%	38	38	38	%	
	Georgina Island			1	1	1	435 00	948 00	765 00	c.	165 00	357 00	289 00	c.	
							615 00	1344 00	1105 00	%	38	38	38	%	
	Gwillimbury East			1	1	1	435 00	948 00	765 00	c.	165 00	357 00	289 00	c.	
							615 00	1344 00	1105 00	%	38	38	38	%	
	Innisfil			1	1	1	435 00	948 00	765 00	c.	165 00	357 00	289 00	c.	
							615 00	1344 00	1105 00	%	38	38	38	%	
	Essa			1	1	1	435 00	948 00	765 00	c.	165 00	357 00	289 00	c.	
							615 00	1344 00	1105 00	%	38	38	38	%	
	Tecumseth			1	1	1	435 00	948 00	765 00	c.	165 00	357 00	289 00	c.	
							615 00	1344 00	1105 00	%	38	38	38	%	
	Adjala			1	1	1	435 00	948 00	765 00	c.	165 00	357 00	289 00	c.	
							615 00	1344 00	1105 00	%	38	38	38	%	
	Tosorontio			1	1	1	435 00	948 00	765 00	c.	165 00	357 00	289 00	c.	
							615 00	1344 00	1105 00	%	38	38	38	%	
	Mono			1	1	1	435 00	948 00	765 00	c.	165 00	357 00	289 00	c.	
							615 00	1344 00	1105 00	%	38	38	38	%	
	Orangeville			1	1	1	435 00	948 00	765 00	c.	165 00	357 00	289 00	c.	
							615 00	1344 00	1105 00	%	38	38	38	%	
	Caledon			1	1	1	435 00	948 00	765 00	c.	165 00	357 00	289 00	c.	
							615 00	1344 00	1105 00	%	38	38	38	%	
	Albion			1	1	1	435 00	948 00	765 00	c.	165 00	357 00	289 00	c.	
							615 00	1344 00	1105 00	%	38	38	38	%	
	Toronto Township			1	1	1	435 00	948 00	765 00	c.	165 00	357 00	289 00	c.	
							615 00	1344 00	1105 00	%	38	38	38	%	
	Etobicoke			1	1	1	435 00	948 00	765 00	c.	165 00	357 00	289 00	c.	
							615 00	1344 00	1105 00	%	38	38	38	%	
	York			1	1	1	435 00	948 00	765 00	c.	165 00	357 00	289 00	c.	
							615 00	1344 00	1105 00	%	38	38	38	%	
	Scarborough			1	1	1	435 00	948 00	765 00	c.	165 00	357 00	289 00	c.	
							615 00	1344 00	1105 00	%	38	38	38

SCHEDULE C.—Comparative Statement by Municipalities, shewing the Number of Provincial Licenses, etc.—*Continued.*

License Districts.	Municipality.	Tavern.			Shop.			Wholesale.			Extended Tavern.			Extended Shop.			Six Months.		
		Ordinary.			Beer and Wine.														
		1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.
NORTH YORK.	Aurora	4	4	4				1	1	2									
	Holland Landing	2	2	2				1											
	North Gwillimbury	4	4	4															
	King	11	9	10				1				1							
	East Gwillimbury	5	5	5															
	Whitchurch	4	4	4															
	Newmarket	6	6	6				3	3	2					1				
	Georgina	6	6	6				1	1	1									
	Stouffville	3	3	3															
WEST YORK.	York, West of Yonge St.	14	14	14				2	2	2			1						
	Vaughan	9	10	10															
	Etobicoke	5	5	5				1	1	1									
	Richmond Hill	3	3	3															
	Parkdale	3	2	3				2	2	2									
	Brockton	3	2					2											
	Woodbridge, Village	4	4	4				2	1	1									
	Weston, Village	3	3	3															

SCHEDULE C.—*Continued.*

Licensed Districts.	Municipality.	Licenses Transferred and Renewed, Transfers 1883-4	Transfers 1884-5	Transfers 1885-6	Renewals. 1883-4	Renewals. 1884-5	Renewals. 1885-6	Total. 1883-4	Total. 1884-5	Total. 1885-6	Amounts received for Provincial Licenses, Transfers, Renewals and Fines in each Municipality. 1883-4	1884-5	1885-6	Proportion thereof paid to Municipalities. 1883-4	1884-5	1885-6	Remarks.
											$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	
SOUTH YORK	Aurora		1	1				5	5	5	520 00	425 00	505 00	332 60	226 77	274 23	
	Holland Landing							3	3	3	200 00	240 00	265 00	104 96	93 10	109 99	
	North Gwillimbury	3		1				7	4	5	255 00	288 00	313 00	134 00	124 19	142 97	
	King			1				12	10	11	1160 00	1076 00	1125 00	818 37	677 88	724 37	
	East Gwillimbury	4	2					6	7	5	330 00	370 00	385 00	173 42	160 39	174 24	
	Whitchurch		2					4	5	4	240 00	293 00	313 00	126 12	126 78	109 89	
	Newmarket	1	2					10	11	9	1165 00	1395 00	1346 25	775 43	748 60	716 05	
	Georgina	1		1				8	7	8	425 00	504 00	532 00	223 35	246 76	249 19	
	Stouffville							3	3	3	240 00	300 00	300 00	454 58	153 12	156 51	
WEST YORK	York, W. of Yonge Street	1	3	4	1	1	1	19	20	21	1316 67	1532 00	1617 00	859 26	869 39	887 64	
	Vaughan	4	2	1				10	12	11	905 00	1130 00	1245 00	655 43	728 36	772 42	
	Etobicoke							6	6	6	360 00	472 00	452 00	194 83	204 68	195 21	
	Richmond Hill							3	3	3	490 00	610 00	530 00	388 94	420 82	372 75	
	Markham							5	4	5	610 00	630 00	845 00	471 69	439 27	589 38	
	Brockton	2						7			440 00	..		268 21			
	Woodbridge Village	1	1	2				7	6	7	595 00	605 00	630 00	437 06	564 28	369 51	
	Weston Village		1					3	4	3	360 00	425 00	420 00	277 42	279 64	272 47	
	Totals										$143,095 40	$8538,714 24	$84,072 97	$287,246 31	$283,539 80	$231,433 91	*Exclusive of Vessel License duties.

SCHEDULE D.

COMPARATIVE STATEMENT of the amount of Fines collected, and of the amounts paid in respect of Expenses of Commissioners and Salaries of Inspectors, in each License District, for the license years 1883-84, 1884-85, and 1885-86 respectively.

LICENSE DISTRICT.	Fines Collected.			Paid in respect of Expenses of Commissioners and Salaries of Inspectors.			
	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	
Addington	110 00	440 00	190 00	539 75	521 75	523 50	
Algoma	.....	195 00	20 00	417 50	442 33	559 33	
Brant, North	70 00	30 00	80 00	430 96	427 00	422 05	
Brant, South	295 00	305 00	564 00	690 96	680 00	728 00	
Brockville and South Leeds	560 00	750 00	290 00	670 50	681 05	731 50	
Bruce, North	60 00	160 00	.....	480 00	458 60	.....	C. T. Act.
Bruce, South	400 00	325 00	.....	674 00	718 00	.....	C. T. Act.
Cardwell	120 00	150 00	120 00	567 29	506 68	525 54	
Carleton	408 00	120 00	120 00	522 56	523 00	523 00	
Cornwall	255 00	310 00	.....	438 96	430 00	.....	C. T. Act.
Dufferin	225 00	50 00	.....	517 00	513 40	.....	C. T. Act.
Dundas	150 00	111 00	.....	607 30	516 40	.....	C. T. Act.
Durham, East	35 00	5 00	125 00	696 40	481 30	450 00	
Durham, West	40 00	60 00	60 00	499 00	476 00	478 50	
Elgin, East	650 00	280 00	266 00	538 28	522 35	522 37	
Elgin, West	122 00	60 00	145 00	482 83	413 15	432 20	
Essex, North	365 00	345 00	100 00	565 46	562 00	549 46	
Essex, South	300 00	298 00	385 00	426 21	473 83	395 14	
Frontenac	100 00	160 00	160 00	504 00	495 00	504 00	
Glengarry	180 00	126 00	.....	529 80	507 50	.....	C. T. Act.
Grey, East	80 00	105 00	20 00	484 75	450 00	496 50	
Grey, North	160 00	200 00	380 00	500 00	510 00	505 00	
Grey, South	160 00	130 00	186 00	450 00	450 00	450 00	
Haldimand	65 00	40 00	70 00	480 60	531 75	450 00	
Halton	1,821 72	.....	.....	791 75	.....	.....	C. T. Act.
Hamilton	915 00	750 00	840 00	1,000 00	1,000 00	1,000 00	
Hastings, East	60 00	20 00	166 00	520 00	526 50	557 25	
Hastings, North	200 00	60 00	130 00	524 20	563 45	543.85	
Hastings, West	180 00	20 00	400 00	813 41	676 34	732 50	
Huron, East	140 00	200 00	.....	620 00	608 00	.....	C. T. Act.
Huron, South	180 00	155 00	.....	540 50	540 50	.....	C. T. Act.
Huron, West	360 00	40 00	.....	602 18	596 67	.....	C. T. Act.
Kent, East	120 00	510 00	254 00	507 70	507 50	514 25	
Kent, West	228 75	180 00	265 00	558 67	553 50	582 50	
Kingston	820 00	370 00	330 00	804 89	800 00	799 92	
Lambton, East	65 00	20 00	20 00	467 80	456 00	459 25	
Lambton, West	320 00	320 00	290 00	456 00	456 00	456 00	
Lanark, North	70 00	205 00	130 00	452 85	458 45	462 10	
Lanark, South	115 00	180 00	326 59	457 30	463 20	537 20	
Leeds and Grenville, North, & South Gren.	240 00	160 00	290 00	567 96	562 00	562 00	
Lennox	160 00	125 00	88 00	450 00	450 00	450 00	
Lincoln	260 00	80 00	240 00	820 55	814 30	803 28	
London	910 00	600 00	640 00	800 00	800 00	802 50	
Middlesex, East	440 00	.....	280 00	550 00	612 00	767 98	
Middlesex, North	130 00	130 00	40 00	561 47	571 50	577 51	
Middlesex, West	281 00	237 00	140 00	556 92	557 75	575 00	
Monck	100 00	20 00	.....	482 00	480 00	482 00	
Muskoka and Parry Sound	339 50	460 00	522 50	612 50	821 00	521 00	
Nipissing	355 00	292 05	170 00	175 00	300 00	309 20	
Norfolk, North	305 00	99 00	.....	572 95	604 25	.....	C. T. Act.
Norfolk, South	40 00	50 00	.....	399 96	485 33	.....	C. T. Act.
Northumberland, East	183 75	185 00	230 00	568 25	494 30	550 05	
Northumberland, West	40 00	.....	160 00	458 50	450 00	405 00	
Ontario, North	110 00	111 00	110 00	722 75	697 50	667 75	
Ontario, South	300 00	240 00	240 00	518 50	510 00	512 00	

SCHEDULE D.

Comparative Statement of amount of Fines, etc., in each License District for the license years 1883-4, 1884-5, 1885-6, respectively.—*Continued.*

License District.	Fines Collected.			Paid in respect of Expenses of Commissioners and Salaries of Inspectors.			
	1883-4.	1884-5.	1885-6.	1883-4.	1884-5.	1885-6.	
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	
Ottawa	245 00	380 00	460 00	1,060 00	1,080 00	1,000 00	
Oxford, North	335 00	220 00	.....	511 57	543 17	.....	C. T. Act
Oxford, South	92 00	360 00	.....	597 94	564 42	.....	C. T. Act.
Peel	80 00	120 00	40 00	552 00	554 00	566 00	
Perth, North	215 00	542 00	290 00	549 96	758 29	581 20	
Perth, South	80 00	103 25	290 00	542 14	529 50	523 50	
Peterborough, East	80 00	60 00	60 00	500 00	500 00	490 00	
Peterborough, West	180 00	80 00	264 00	416 35	420 50	411 42	
Prescott	200 00	100 00	327 59	450 00	462 35	459 75	
Prince Edward	80 00	140 00	399 00	553 43	560 00	567 50	
Renfrew, North	80 00	290 00	.....	400 00	547 67	.....	C. T. Act.
Renfrew, South	550 00	165 00	.....	472 28	513 49	.....	C. T. Act.
Russell	202 00	130 00	300 00	480 70	493 10	500 [illegible]	
Simcoe, East	192 00	210 00	.....	599 20	692 71	.....	C. T. Act.
Simcoe, South	40 00	80 00	.....	499 00	486 00	.....	C. T. Act.
Simcoe, West	.....	60 00	.....	560 89	543 29	.....	C. T. Act.
Stormont	100 00	110 00	.....	525 96	561 66	.....	C. T. Act.
Thunder Bay	357 60	.....	.....	255 33	.....	.....	
Thunder Bay, East	.....	773 50	1,110 00	.....	298 00	317 00	
Thunder Bay, West	.....	352 50	310 00	.....	358 33	420 00	
Toronto	1,520 00	2,647 00	3,140 00	2,450 00	2,516 67	2,741 66	
Victoria, North, and Haliburton	128 00	40 00	80 00	499 88	500 00	471 57	
Victoria, South	230 00	60 00	88 15	605 60	655 60	634 25	
Waterloo, North	160 00	120 00	315 00	502 00	511 50	505 50	
Waterloo, South	300 00	60 00	42 00	564 38	582 50	574 00	
Welland	215 00	166 00	361 00	736 55	673 60	730 50	
Wellington Centre	65 00	110 00	60 00	511 78	505 03	474 30	
Wellington, South	145 00	145 00	20 00	450 00	641 79	649 32	
Wellington, West	200 00	108 00	240 00	624 29	555 84	619 07	
Wentworth, North	20 00	120 00	80 00	486 00	481 50	510 00	
Wentworth, South	320 00	20 00	160 00	508 00	496 00	528 00	
York, East	.....	130 00	76 00	495 76	485 10	532 66	
York, North	235 00	90 00	363 00	507 00	517 00	500 00	
York, West	60 00	160 00	320 00	498 00	487 00	513 80	
Total	21,406 32	18,826 30	18,717 74	49,610 60	49,792 82	39,717 63	

SCHEDULE E.

COMPARATIVE STATEMENT, shewing the number of Prisoners committed to the County Gaols for Drunkenness, during the years 1876, 1877, 1878, 1879, 1880, 1881, 1882, 1883, 1884, 1885 and 1886.

COUNTY OR DISTRICT.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.	1886.
Algoma	8	4	4	24	19	17	24	21	15	12	1
Brant	97	84	75	63	81	64	80	75	58	28	91
Bruce	1	2	17	8	2	14	4	10	3	.....	2
Carleton	387	319	283	272	222	269	265	261	314	205	280
Dufferin	.....	.....	.....	.....	.....	1	.....	.....	1	1	3
Elgin	31	41	47	54	53	45	61	92	82	57	30
Essex	87	55	60	59	71	51	91	121	103	47	31
Frontenac	143	137	139	126	102	53	25	46	75	74	58
Grey	15	13	14	35	40	23	23	19	28	36	20
Haldimand	7	2	6	10	15	6	4	7	7	18	15
Halton	21	15	6	1	6	5	4	7	6	9	13
Hastings	20	13	43	34	16	35	67	57	50	45	34
Huron	24	29	22	15	22	18	8	5	4	3	4
Kent	24	20	20	33	24	13	28	23	26	18	14
Lambton	123	84	142	115	120	77	77	75	105	130	72
Lanark	7	6	10	8	7	10	4	9	7	6	4
Leeds and Grenville	84	69	84	71	72	56	67	19	135	80	36
Lennox and Addington	6	4	5	9	11	14	11	18	20	6	3
Lincoln	56	98	68	51	44	55	41	65	39	29	21
Middlesex	155	106	211	193	235	210	242	269	445	277	338
Muskoka and Parry Sound	2	9	8	6	8	3	13	8	16	84	39
Nipissing	.....	.....	.....	1	1	.....	2	10	17	6	.....
Norfolk	11	35	21	15	26	14	18	18	17	4	6
Northumberland and Durham	56	67	38	24	25	20	10	21	26	26	15
Ontario	10	10	12	11	6	2	5	10	1	4	.....
Oxford	57	30	46	55	54	47	32	28	51	21	28
Peel	32	45	22	27	14	9	14	4	10	24	10
Perth	54	75	56	35	39	26	20	37	14	17	15
Peterborough	5	11	5	5	27	27	38	71	30	27	13
Prescott and Russell	2	6	.....	.....	1	1	2	2	.....	3	1
Prince Edward	31	29	22	46	75	60	76	70	46	41	54
Renfrew	2	3	2	5	10	10	24	17	27	11	2
Simcoe	66	91	133	82	107	62	56	87	99	31	35
Stormont, Dundas and Glengarry	7	33	18	17	3	4	7	8	9	3	1
Thunder Bay	78	195	95	81	83	126	88	296	705	153	119
Victoria and Haliburton	22	32	25	10	7	8	14	7	20	13	1
Waterloo	13	10	4	28	11	11	10	14	11	7	4
Welland	69	101	321	188	186	145	50	34	23	33	40
Wellington	41	36	26	23	40	36	51	93	49	32	12
Wentworth	259	396	382	382	447	339	396	376	295	368	385
York	1755	1807	1293	1359	1463	1342	1445	1485	1661	1707	1705
Total	3868	4032	3785	3581	3795	3328	3497	3897	4650	3696	3555

SCHEDULE F.—Shewing the result of voting on the Canada Temperance Act, 1878 (the Scott Act) in the following Cities and Counties in which the Act is now in force

County or City	Date of Polling.	No. of Votes on Voters' Lists.	Votes Polled.				Majorities in Municipalities.		Majority in County or City.	
			Total Votes Polled.	Votes Rejected.	For the Act.	Against the Act.	For.	Against.	For.	Against.
Brant	December 11, 1884	5365	2778		1690	1088	703	101	602	
Brantford, City	December 11, 1884	2424	1478		646	832		166		166
Bruce	October, 30, 1884	14962	7688		4501	3187	1943	629	1314	
Carleton	January 29, 1885	8681	4459	53	2440	1747	726	33	693	
Dufferin	October 30, 1884	5076	3013		1904	1109	805	10	795	
Dundas	October 16, 1884	4578	2945	17	1626	933	762		762	
Elgin	March 10, 1885	8529	4814		3335	1479	1893	37	1856	
Frontenac	May 21, 1885	6088	2047		1364	683	702	51	651	
Glengarry	October 16, 1884	8711	7961	19	4220	922	438	10	398	
Grenville	January 12, 1885	4318	1258	8	634	526	168		168	
Haldimand	July 15, 1885	4850	3848	31	1705	2063	216	524		308
Hastings	July 2, 1885	9677	4749		2789	2451	539	701		162
Huron	October 30, 1884	16950	10296	135	5967	4394	1862	209	1653	
Kent	January 15, 1885	11750	6884	41	4368	1975	2474	81	1393	
Lambton	March 10, 1885	[illegible]	6611		4465	1546	2927	8	2919	
Lanark	January 15, 1885	[illegible]	4526	136	2433	2057	709	303	406	
Leeds and Grenville	December 18, 1884	13443	9442		5058	4384	1572	698	874	
Leeds and Addington	January 15, 1885	6274	3997	39	2047	2011	548	512	36	
Lennox	January 18, 1886	3544	3559	38	2060	1490	753	183	570	
Middlesex	June 18, 1885	27090	8135	37	5745	2370	3410	35	3375	
Norfolk	November 11, 1884	8697	4869	25	2781	1694	1300	194	1106	
Northumberland and Durham	February 26, 1885	[illegible]	9943		6080	3863	2533	146	2387	
Ontario	July 16, 1885	11990	6965	31	3413	2961	1497	146	1351	
Oxford	March 20, 1884	12018	7571		4673	2898	1031	256	775	
Peel	October 25, 1884	[illegible]	3891		1805	1999	448	342		194
Perth	June 18, 1885	13986	6904	60	3648	3036	874	992		168
Peterborough	September 24, 1885	7966	3485	1	1998	1486	712	200	512	
Prescott and Russell	November 20, 1885	6379	4406	31	1335	3131	1139	1916		1796
Prince Edward	October 30, 1884	3986	3171		1523	1648	182	297		115
Renfrew	November 7, 1884	5402	2766		1748	1018	857	127	730	
Simcoe	October 9, 1884	17369	10231		5732	4529	1508	325	1183	
Stormont	October 16, 1884	4748	2846	42	1675	1129	597	24	546	
St. Catharines	November 19, 1885	2849	1844	3	478	1366	478	1066		588
St. Thomas	March 30, 1886	2576	1467	11	734	722	734	745	11	
Victoria	July 23, 1885	8581	3932	37	2439	1456	1186	240	946	
Wellington	April 2, 1885	[illegible]	7649		4476	3064	1536	154	1442	
					Against Repeal	For Repeal	Against Repeal	For Repeal	Against Repeal	For Repeal
Halton, previously repealed by a vote	September 9, 1884	6047	3754		1947	1767	406	226	180	

SCHEDULE G.

NAMES AND POST OFFICE ADDRESSES OF THE INSPECTORS OF LICENSES of the several License Districts throughout the Province.

LICENSE DISTRICT.	INSPECTOR.	P. O. ADDRESS.
Addington	James Aylsworth	Tamworth.
Algoma	J. B. White	Michaels Bay.
Brant, North	Geo. Pike	Brantford.
Brant, South	Isaac B. Merritt	Scotland.
Brantford, City	Southworth Cole	Brantford.
Brockville and South Leeds	R. R. Phillips	Caintown.
Bruce, North	Alexander McConnell	Port Elgin.
Bruce, South	Angus Stewart	Lucknow.
	Frederick Kleist	Walkerton.
Cardwell	Thomas Hanton	Caledon, East.
Carleton	John O'Callaghan	Kars.
Cornwall	William Pollock	Cornwall.
Dufferin	Thomas Anderson	Orangeville.
Dundas	Asa Beach	Iroquois.
Durham, East	E. A. Powers	Port Hope.
Durham, West	W. R. Climie	Bowmanville.
Elgin, East	Archibald McIntyre	St. Thomas.
Elgin, West	Alexander Beaton	West Lorne.
Essex, North	Thomas J. Elliott	Windsor.
Essex, South	Alanson Elliott	Oxley.
Frontenac	John Dawson	Wolfe Island.
Glengarry	George H. McGillivray	Williamstown.
Grey, East	James Campbell	Clarksburg.
Grey, North	C. C. Pearce	Owen Sound.
Grey, South	Thomas A. Harris	Durham.
Haldimand	Joseph M. Doyle	Caledonia.
Haliburton	R. C. Garratt	Minden.
Halton	W. D. Brothers	Milton.
Hamilton	J. I. Mackenzie	Hamilton.
Hastings, East	Michael Lally	Belleville.

SCHEDULE G.—*Continued.*

License District.	Inspector.	P. O. Address.
Hastings, North	Edward Mounsey	Madoc.
Hastings, West	Michael J. Grainger	Belleville.
Huron, East	John R. Miller	Jamestown.
Huron, South	O. H. Sprague	Centralia.
Huron, West	Wm. J. Paisley	Clinton.
Kent, East	Thomas Boon	Bothwell.
Kent, West	Isreal Evans	Chatham.
Kingston	William Glidden	Kingston.
Lambton, East	H. G. Taylor	Wyoming.
Lambton, West	Ruben C. Palmer	Sarnia.
Lanark, North	John Scott	Almonte.
Lanark, South	Henry Stafford	Perth.
Leeds and Grenville, North and South Grenville	Charles Chapman	Prescott.
Lennox	G. E. Sills	Napanee.
Lincoln	R. Fowlie	St. Catharines.
London	Robert Henderson	London.
Middlesex, East	D. H. Williams	London East.
Middlesex, North	Daniel Seloff	Clandeboye.
Middlesex, West	W. C. Robertson	Mt. Brydges.
Monck	J. W. McCallum	Dunnville.
Muskoka and Parry Sound	Lieut. F. Stephenson	Bracebridge.
Nipissing	Napoleon Fink	Mattawa.
Norfolk, North	W. F. Nickerson	Simcoe.
Norfolk, South	John E. Dowse	Port Dover.
Northumberland, East	Robert Cole	Campbellford.
Northumberland, West	John Thompson	Colbourg.
Ontario, North	Thompson & Frankish	Sunderland.
Ontario, South	John Ferguson	Whitby.
Ottawa	John O'Reilly Geo. E. St. George, Asst. Insp. & Prov. Officer	Ottawa.
Oxford, North	William G. McKay	Woodstock.
Oxford, South	Gordon H. Cook	Ingersoll.

SCHEDULE G.—*Continued.*

License District.	Inspector.	P. O. Address.
Peel	George Blain	Brampton.
Perth, North	Alexander M. Fisher	Amulree.
Perth, South	John S. Coppin	Mitchell.
Peterborough, East	Wm. Darling	Warsaw.
Peterborough, West	George Cochrane	Lakefield.
Prescott	James H. Molloy	Fournier.
Prince Edward	D. L. Bongard	Picton.
Renfrew, North	Alfred J. Fortier	Pembroke.
Renfrew, South	Geo. W. McDonald	Renfrew.
Russell	Daniel McLaurin	Metcalfe.
Simcoe, East	Angus McKay	Orillia.
Simcoe, South	Geo. Dinwoody	Clover Hill.
Simcoe, West	John W. Morrow	Barrie.
Stormont	Donald P. McKinnon	South Finch.
Thunder Bay, East	Robert Maitland	Port Arthur.
Thunder Bay, West	Frank Gardner	Rat Portage.
Toronto	Thomas Dexter, Chief John Wilson, West Thos. A. Hastings, East	Toronto.
Victoria, North	A. C. Campbell	Woodville.
Victoria, South	John Short	Lindsay.
Waterloo, North	Thomas Tilt	Waterloo.
Waterloo, South	Samuel D. Martin	Preston.
Welland	Archibald Thompson, jr	Welland.
Wellington, Centre	John Macdonald	Elora.
Wellington, South	W. S. Cowan	Guelph.
Wellington, West	F. Flath	Drayton.
Wentworth, North	W. B. Williams	Dundas.
Wentworth, South	Jonathan Davis	Hamilton.
York, East	James Eckhardt	Unionville.
York, North	William Malloy	Newmarket.
York, West	Robert Wilcock	Richview.

REPORT

OF THE

FRUIT GROWERS' ASSOCIATION

OF ONTARIO,

FOR THE YEAR 1886.

Printed by Order of the Legislative Assembly.

Toronto:
PRINTED BY WARWICK & SONS, 26 AND 28 FRONT STREET WEST.
1887.

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EIGHTEENTH ANNUAL REPORT

OF THE

FRUIT GROWERS' ASSOCIATION

OF ONTARIO.

To the Honourable A. M. Ross, Commissioner of Agriculture :

Sir,—I have the honour to submit herewith the eighteenth Annual Report of the Fruit Growers' Association of Ontario.

I am, Sir,

Your obedient servant,

L. WOOLVERTON,
Secretary.

Grimsby, October 15th, 1886.

THE ANNUAL MEETING.

The Annual Meeting of the Fruit Growers' Association of Ontario, was held at Toronto, on the evening of Tuesday, 14th September, 1885, at St. Lawrence Hall. The President, Wm. Saunders Esq., occupied the chair.

The Secretary read the Minutes of the last Annual Meeting, and they were approved.

The Director's Report was read and adopted.

The President delivered his Annual address, which was received with the thanks of the Association; and afterward the following resolution was passed viz:—

Resolved,—That this Association desires to place upon record its deep appreciation of the many and valuable services of our retiring President, Mr. Wm. Saunders, in the interests of fruit growing and of Horticulture in general; and, more particularly at the present time, his untiring and invaluable researches into the modes and appliances for preserving and conveying fruit, which have so materially contributed to Canada's success at the Colonial and Indian Exhibition.

A Committee on Nominations was then appointed, and, this Committee having retired,

Mr. Morton drew attention to a seeding plum, which originated with Mr. Wilson, of Wingham. It was described as large, dark purple and productive. It bore its first crop in 1884, had no crop in 1885, but in 1886 it yielded two bushels. It has a pleasant subacid flavour; it clings a little to the stone, and is fine for preserving. Messrs. Morton, Allan and Smith were appointed a Committee to suggest a name. This Committee suggested that it be named "Wilson."

The Report of the Nomination Committee was then read, which was as follows:—

OFFICERS OF THE ASSOCIATION.

President.—Alexander McD. Allan, Esq., Goderich, Ont.

Vice-President.—W. E. Wellington, Esq., Toronto, Ont.

Directors.—Agricultural Division No. 1, John Croil, Aultsville; No. 2, A. A. Wright, Renfrew; No. 3, R. J. Dunlop; No. 4, P. C Dempsey, Trenton; No. 5, Thomas Beall, Lindsay; No. 6, Col. J. Magill, Oshawa; No. 7, Murray Pettit, Winona; No. 11, Wm Saunders, London; No. 12, W. W. Hilborn, Arkona; No. 13, Charles Hickling, Barrie.

Auditors.—Charles Drury, Esq., Crown Hill; James Goldie Esq., Guelph.

Respectfully submitted,

P. C. DEMPSEY,
Chairman.

The names were taken up in succession, and all were duly elected, according to the Report of the Committee. The Association then adjourned.

At the meeting of the Board of Directors, held subsequent to the election of officers, Linus Woolverton, Grimsby, was appointed Secretary-Treasurer.

THE AGRICULTURAL DIVISIONS.

No. 1. Stormont, Dundas, Glengarry, Prescott and Cornwall.
" 2. Lanark Renfrew, city of Ottawa, Carleton and Russell.
" 3. Frontenac, city of Kingston, Leeds, Grenville and Brockville.
" 4. Hastings, Prince Edward, Lennox and Addington.
" 5. Durham, Northumberland, Peterborough and Victoria, including Haliburton.
" 6. York, Ontario, Peel, Cardwell and city of Toronto.
" 7. Wellington, Waterloo, Wentworth, Halton, Dufferin and city of Hamilton.
" 8. Lincoln, Welland, Haldimand and Monck.
" 9. Elgin, Brant, Oxford and Norfolk.
" 10. Huron, Bruce and Grey.
" 11. Perth, Middlesex and city of London.
" 12. Essex, Kent and Lambton.
" 13. Algoma, Simcoe, Muskoka and Parry Sound.

ANNUAL ADDRESS OF THE PRESIDENT.

GENTLEMEN,—Once more I have the honour to address you as your retiring President. On this occasion permit me to congratulate you on the results of the fruit harvest for the year. The crops of early small fruits have been abundant. Cherries and plums have given a much larger yield than usual; pear trees have in most instances borne well, and there is a plentiful harvest of grapes, while the apple crop, although light in some districts, may on the whole, taking fall and winter fruits together, be considered fair. The fruit-grower has thus shared in the general abundance which has characterized the season of 1886.

Having been absent from Canada during the early part of the summer, engaged in looking after the fruit interests of the country abroad, it is natural that I should take this opportunity of placing before you some of the methods employed, the results which have been reached, and indicate the probabilities of future benefits to result from the efforts which have been put forth.

One of the most important events which it has ever been my privilege to call your attention to, bearing on the present and future prospects of fruit-growing in Canada, is the exhibition of Canadian fruits at the Colonial and Indian Exhibition held during the present year in London, England. When the proposition was first made that we should endeavour to prepare a collection of fruits to be exhibited during the following year, from May to November, the undertaking seemed to be beset with almost insuperable difficulties. The preservation of the form and texture of ripe fruit for so long a period past its time of ripening—considering the rapid chemical changes which maturing fruit undergoes and the constant tendency to decomposition resulting from these changes—was in itself a matter of no small difficulty, especially in view of the multiform character of the texture and structure of the different fruits our favoured climate produces. But with this difficulty overcome, and a suitable antiseptic fluid found which would arrest the natural changes which occur during and following the ripening of fruit, a still greater difficulty presented itself in the preservation of the many delicate shades of colour which adorn the surface of our fruits, and impart to them a beauty unapproached by such as are ripened under less favourable conditions. There is an old adage that "where there's a will there's a way." In this instance the will was not wanting, and by an extended and long-continued series of experiments the way was found which led to almost entire success. I say almost, because in some instances, after immersion in preserving fluids for many months and subsequent exposure to light and sunshine, the bright shades of red, which add such a glory to some of our fruits, became gradually less brilliant, and eventually gave place to comparatively dull and pale colours. Notwithstanding these

changes, which it seems scarcely possible to prevent, visitors, who are not familiar with the true colours of our fruits, look upon the exhibit as highly satisfactory and a brilliant success. Those fruits which have when ripe a white or yellow colour, have been very beautifully preserved, and maintain a brilliancy of hue somewhat exceeding nature, resulting from the bleaching influence of the chemicals used in the solutions, and the long exposure to light. The yellow and white apples, the pears, quinces, peaches, yellow plums, white cherries and currants, are all remarkably attractive and draw from visitors constant and merited admiration.

Another frequent source of failure lay in the exosmodic action which takes place when fruits are immersed for a long time in saline solutions. By this action the juices of the fruit pass out through the pores in the skin, and the specimens become contracted, shrivelled and unsightly. Efforts were made to remedy this by dipping the fruit in melted paraffine, so as to give it a thin coating of this substance; but following the use of this, more rapid changes occurred in the interior, gases were evolved and large unsightly blisters deformed the specimens so treated.

Valuable suggestions were received from Dr. Charles Mohr, the well-known botanist of Mobile, Ala., based on information obtained by him from Berlin, Prussia, as to the results of some experiments in preserving fruit there with sulphurous acid; also from Prof. R. Ramsay Wright, of Toronto University, suggested by the results he had obtained in the preservation of the natural colours of animal tissues by the use of hydrate of chloral, and from Prof. C. G. Hoffman, chemist to the Geological Survey of Ottawa, as to the use of boroglyceride, a mixture of boracic acid and glycerine. With those substances many experiments were tried, and eventually they were found to be the most useful of all the chemicals tested for this purpose.

I need not weary you with lengthy details as to how this success was finally reached; it was not without much thought and labour. No such exhibit on such a scale had ever been undertaken before, and there was very little to guide one further than indications as to the most promising lines of experiment to follow. The records of the patent office in the United States, as well as those covering English and French patents for the past ten or twenty years, were carefully perused with the hope of obtaining some useful hints. Enquiries were made at the various experimental stations in the United States, and of many of the leading chemists, physiologists and botanists of America, and with the aid of the information thus gained, added to personal experience and observation the various lines of experiment were mapped out. Many of the experiments resulted in absolute failure, some were partially successful, while others produced excellent results. Difficulties at first unthought of, presented themselves in a most forcible way as the experimental work progressed. The relative specific gravity of the fluid as compared with the fruit, was a serious obstacle in some cases, for where the fluid was dense so much constant pressure was required to keep the specimens under the surface that, after a time, they were forced out of shape and burst.

By the use of solutions of sulphurous acid, the yellow and light coloured fruits have been well preserved, and promise to remain unchanged for an indefinite period. With a solution of hydrate of chloral, varying in strength from two to four per cent. or of boroglyceride in the same proportion excellent results were obtained with green and russet fruits and fair results with those having different shades of red, while solutions of salicylic acid in proportion of one drachm to the quart has preserved the red and dark grapes, with but little change of colour. The fluids used in which to dissolve these chemicals consisted of water alone, or water mixed with from ten to twenty per cent. of alchohol.

The collection having been prepared, a suitable form of package was devised which provided a compartment for each glass jar, and by means of which the entire collection from Ontario was transported across the ocean without a single breakage, and that from Quebec with only a trifling loss.

The Nova Scotia fruits were sent in a fresh condition, and consisted largely of winter varieties of apples. These, together with fresh winter fruit sent from Ontario, were shown in their natural state as long as circumstances would permit, and then bottled in fluids, in which they still retain a large proportion of their natural beauty. While

Ontario, Nova Scotia and Quebec supplied the larger part of the exhibit, some fine samples were sent from New Brunswick, Prince Edward Island and British Columbia. The entire collection consisted of about 1,000 jars, about one-half of which were apples, the other half pears, grapes, plums, peaches, quinces, gooseberries, currants, raspberries, blackberries, strawberries, cranberries, wild fruits, nuts, etc. These formed a prominent and most attractive feature of the agricultural trophy—a structure which has elicited the continued admiration of visitors, and drawn from members of the press, from all parts of the world, the highest commendations.

It would be withholding praise where praise is due, were I to conceal the fact that more than one-half of the entire exhibit is from Ontario, and that the Ontario collection was mainly the result of the united efforts of the directors and members of this Association.

In addition to the large collection of preserved specimens, we had at the time of the opening of the exhibition in May a very good assortment of select winter apples in fresh condition, which were sent from Nova Scotia and Ontario. Some of these were displayed about the agricultural trophy on plates, and others were used to fill vacancies in the preserved collection. It is worthy of remark in this connection that specimens of the Fallawater apple, contributed by the County of Middlesex, which had been packed in oat-hulls, were shown by taking a few out of the packing at a time, in good condition as to appearance, up to the middle of July.

On the 10th of May a show of flowers and fruits was held in the hall of the Royal Horticultural Society, to which Australia and Canada were invited to contribute fresh fruits. Australia, whose apple harvest takes place in March, had received a few days previous a large quantity of fresh fruit gathered just before shipment and forwarded in cold storage, whereas all the Canadian specimens had been gathered from six to seven months. From the Canadian apples on hand the following fifteen varieties were selected, all being uniformly fine and in very fair condition :—Baldwin, Northern Spy, Canada Red, King, Wagener, Golden Russet, Roxbury Russet, English Nonpareil, Seek no Further, Mann, Vandevere, Swaar, Phœnix, Ben Davis and Limbertwig. The judges carefully compared this collection with that from Australia, and while the Australian fruits were in fresher condition and some of them of larger size than the Canadian, it was held that the fruit from Canada was better coloured and higher-flavoured, and the judges finally decided to award to each collection a silver medal and certificate of merit. Considering the disadvantages under which we were placed, the result was highly gratifying.

To my esteemed coadjutor and successor, Mr. C. R. H. Starr, secretary of the Fruit Growers' Association of Nova Scotia, I desire to express my deepest obligations. His assistance in every part of the work was invaluable and was ever rendered in the most prompt and cheerful manner.

The Canadian fruit has done much to dispel the erroneous ideas which have so long prevailed, both in Great Britain and on the Continent, regarding the character of the climate of Canada. The question most frequently asked was, "How is it possible that such fine fruits as these can be grown in so cold a country as Canada? The visitors were surprised to see so large a collection of varieties, and were particularly interested in the display of grapes, which filled about a hundred jars. So frequently was the remark heard "these must have been grown under glass" that it was deemed necessary to procure prominent signs with the words "Canadian fruits, all grown in the open air," painted on them and hang them at each corner of the trophy. By this arrangement every individual in the constant stream of visitors was confronted by this plain statement which offered convincing proof that the climate of Canada could not be so cold as was generally supposed.

The fact that Australia has in the past attracted a larger number of immigrants from the British Isles than Canada, is doubtless mainly due to the false notions which have so long prevailed as to the unfavourable conditions of our climate. There is every reason to believe that the great interest, which has now been awakened in our fruits, will result in a largely increased demand for them, and that new markets will be opened to our shippers; but were no advantages of this sort to result from this exhibition, the service rendered

in correcting the erroneous opinions, from the effect of which Canada has suffered so long, will by the stimulus it will give to emigration during future years, amply justify any expense which may have been incurred in this connection.

Before I left the exhibition in England a meeting was held of the representatives of the different provinces and the question of securing further exhibits of fresh fruits, field roots and vegetables was fully discussed. The outline of a plan of procedure was prepared, which was submitted to the High Commissioner, Sir Charles Tupper, and received his cordial approval. I was charged with the duty of submitting the proposed plan on my return to Canada to the Minister of Agriculture, and urging its adoption. In discharging this pleasing office I found the Minister of Agriculture to be equally anxious with ourselves that nothing be left undone to make this part of the exhibition a complete success. Instructions were at once given me to proceed with the necessary arrangements, to the carrying out of which I have since devoted every hour I could command, and with the kind co-operation of fruit growers and farmers everywhere, which has been most cordially given, the success of the undertaking is assured.

In order to rivet the good impressions which Canadian fruits have made still more strongly, supplementary exhibits are now being prepared and will be forwarded during the next two weeks. The leading varieties of our autumn apples and pears have already been sent to London in considerable quantities, to be sold in the Canadian fruit markets, which will not only give the visitors to the exhibition the opportunity of purchasing samples of these fruits and thus judging of their quality, but when the returns are known and the condition in which the fruit reached England ascertained, I think it will be demonstrated that we can do a profitable business in that direction, and thus provide an outlet for our surplus autumn fruits, which it is difficult to dispose of at home at remunerative prices. As an indication of what we may expect, I received yesterday a telegram advising me that the first fifty boxes of Duchess of Oldenburgh apples, which were forwarded at the Belleville district, had reached London in excellent condition, and had all been sold at seven shillings per box. As these boxes contain just one bushel, and such select apples have been freely offering this season at from forty to fifty cents per bushel in many parts of the province, it will be seen that, after adding the cost of the box, twenty cents, there remains the difference between sixty and and seventy cents here and $1.75 there to pay cost of transportation and furnish profit to the shipper.

These fruits for market purposes have been forwarded weekly for several weeks past in quantities of fifty or sixty bushel boxes per week. Bushel boxes have been used instead of barrels for the reason that fruit carries so much better in that form of package and will, we believe, realize higher prices than the same fruit in barrels. The varieties which have furnished the bulk of the fruit sent are Duchess of Oldenburgh, Red Astrachan, Gravenstein, and St. Lawrence apples, and Bartlett, Clapp's Favourite and Flemish Beauty pears. A few bushels of plums have also been forwarded from the Goderich district as an experiment. As a fitting climax to the whole, arrangements have been made to make a grand display of fresh fruits, field roots and vegetables, during the last month of the exhibition. To accomplish this purpose and to secure representation from every district, the finest specimens obtainable will be selected from the more important agricultural exhibitions. The first consignment of this character will go forward by the mail steamer leaving Montreal next week and will contain a choice collection selected from the Industrial Exhibition at Toronto and the exhibition of the Montreal Horticultural Society. Following these will come selections from the Provincial Exhibition at Guelph, the Dominion Exhibition at Sherbrooke, also collections from the Hamilton, London and Belleville exhibitions. It is expected that collections will also be forwarded from Nova Scotia and the other Eastern provinces, as well as Manitoba and British Columbia, and when these are all brought together it is believed they will form the finest display of Canadian fruit, field roots and vegetables ever seen. With these later shipments there will be sent about two tons of grapes for the Canadian fruit market, obtained from vineyards in all parts of the grape growing districts from Quebec to Niagara.

On the 12th to the 14th of October there is to be held in the hall of the Royal Horticultural Society an exhibition of English fruits, where Canadian fruits will have an opportunity of being placed in competition with those grown in England. We hope to be able

to place before the people of Great Britain on that occasion such a display of orchard and field products as will fairly astonish them. The earlier weekly shipments of fruit for market purposes have been made under ordinary shipping conditions, the boxes being placed in one of the cooler parts of the steamer, but for those selected products designed for exhibition, and also for the grapes which are to be forwarded at the same time, special refrigerating chambers are being fitted up on two of the mail steamers, where, by the use of ice, the fruit will be kept at an even low temperature, which will ensure its reaching its destination in good condition. Our vice-president for the past year, Mr. A. McD. Allan, will go in charge of the collection to be sent by the next mail steamer, and our esteemed ex-president, P. C. Dempsey, with the shipment to be made the week following. These gentlemen have been selected for this duty because they are intimately acquainted with Canadian fruits of all classes, and for the further reason that they have both had much experience in shipping fruit to Great Britain. With the aid of these special experts, associated with Mr. C. R. H. Starr, the Canadian representative now in charge of the fruit exhibit, I am sure that everything which can be done to promote the fruit interests of Canada abroad will be carefully attended to.

As soon as my duties in connection with the fruit exhibit were accomplished, I visited the southern counties of England, the north of England and Scotland, and spent a few days in Ireland and in Wales. I also visited France and portions of Italy and Switzerland, and embraced every opportunity which presented itself to ascertain the condition of agriculture and horticulture at every point in my route. In the cultivation of flowers and of ornamental trees and shrubs we are a long way behind these older countries and have many lessons to learn, the acquiring of which would add beauty to our surroundings and further charms and attractions to our homes, results which are exceedingly desirable, and which would be highly appreciated by a large proportion of the community. But in the more practical departments of farming and horticulture, in the rearing of stock, the production of grain, field roots and fruits, as well as dairy products, we are far to the front, and have now comparatively little to learn from Europe. In the use of labour-saving appliances for agricultural purposes, and in the excellence and variety of our grain, roots and fruits we are, on the whole, quite equal and in many respects in advance of the older countries referred to; while in general intelligence and skill in agriculture and horticultural pursuits and the readiness, yea, eagerness, shown by our farmers and fruit-growers to possess and to test everything likely to result to their advantage, entitles Canada to a position second to none. This intelligent and discriminating spirit augurs well for the future of our country, and will inevitably lead to the more extensive development of those departments of agricultural industry which are found to be most profitable and best suited to the conditions of our soil and climate. With such advantages secured, steady progress may be expected ; although we have still very much to learn, and new problems will necessarily continue to present themselves for solution, as the settlement of the country, with its varied climate, proceeds. During the past year a measure has been introduced by the Minister of Agriculture for the Dominion and received the sanction of Parliament, providing for the establishment of experimental farms in different parts of Canada, where new varieties of agricultural and horticultural products may be tested, and where the many problems which present themselves in connection with the products of the soil will be investigated and reported on. In the infancy of this enterprise it would perhaps be premature to speak of its probable effects on fruit culture, but enough is known to justify the belief that when fairly established these institutions will undertake such work as will result in enlarging the area of fruit culture in the several provinces, and thus place within the reach of settlers and their families these health-giving luxuries. and at the same time increase the export trade in fruits.

I shall not trespass further on your patience. The president's term of office closes with each year, but it has been my pleasure to be re-elected to serve you in this position for several years past, during which term I have endeavoured to serve you to the best of my ability. I have always been opposed to anyone enjoying a monopoly of such honours as this Association has to bestow, and have for this reason accepted the office during the past two or three years under protest, and only at the urgent solicitation of friends. I know that there are many gentlemen connected with this Association who are well qualified

to fill this position acceptably, and of late years other duties have devolved upon me to such a degree, that I am unable any longer to give that time and attention to this position which its duties demand. In view of these considerations, and the possibility of someone re-nominating me, I beg to state plainly and frankly that I cannot longer continue to serve you in this capacity. Thanking you all for the kind and prompt manner in which you have endeavoured to further my wishes and the interests of the Association, which I trust have ever been in harmony, I sincerely hope that the future career of the Fruit Grower Association of Ontario will be one of increasing usefulness.

REPORT OF THE DIRECTORS.

To the Members of the Fruit Growers' Association of Ontario:

GENTLEMEN.—In submitting our report at the close of our term of office we have the pleasure of being able to say that there has been some increase in our membership during the past year, the number now on our roll being 1,980, as against 1,652 last year. We have endeavoured to exercise the strictest economy in conducting the affairs of the Association, and believe that the expenditure of the past year has been as small as was possible, consistently with the efficient working of the Association.

The publication of the *Canadian Horticulturist* has been continued monthly, as heretofore, although we have deemed it advisable to omit the coloured plate in some of the numbers, and to substitute therefor the less expensive plain engraving.

We suggest to our successors the importance of continued exertions to increase the number of our membership, and a careful consideration of the possibility of increasing the attractiveness and popularity of our monthly publication.

Since our last annual meeting the Secretary-treasurer of the Association has been compelled, by financial reverses, to make an assignment for the benefit of creditors. He is indebted to the Association to some extent, but we are unable at present to ascertain whether there will be ultimate loss or not to the Society. The assets of the estate are stated as sufficient to cover all liabilities, but in the opinion of the Directors it is probable there will be a deficiency, not, however, to any large amount.

All of which is respectively submitted,

WM. SAUNDERS,
President.

TREASURER'S REPORT.

RECEIPTS.

From 1,950 members, less commissions	$1,833 30
" advertisements	116 39
" Government Grant	1,800 00
" balance last audit	553 59
Total	$4,303 28

DISBURSEMENTS.

Audit, 1885	$20 00
Reporting, three meetings	179 85
Officers' expenses	286 15
Freight and express	22 28
Postage	59 79
Wrapping, reports and wrappers	15 00
Canadian Horticulturist	1,104 96
Plants and seed distribution	254 20
Advertising	10 25
Customs	3 70
Stationery	5 20
Notes and discounts	819 95
Guarantee premium	20 00
Printing	60 75
Sundries	1 20
Clerk	100 00
Secretary	200 00
Editor	400 00
Balance	740 00
	$4,303 28

TORONTO, Sept. 14th, 1886.

We the undersigned Auditors have duly examined the accounts of the Treasurer of the Fruit Growers' Association of Ontario and find them correct, shewing a balance of $740 at this date.

CHARLES DRURY,
JAS. GOLDIE, } Auditors.

WINTER MEETING.

The Winter Meeting of the Fruit Growers' Association was held in the council chamber of the city of Stratford, on Wednesday and Thursday, the 10th and 11th of February, 1886.

The meeting was called to order by the Vice-President, Mr. Alex McD. Allan, of Goderich, in the absence of the President, and the minutes of the last meeting were read by the Secretary, Mr. D. W. Beadle.

FENCES.

The first topic discussed was "Fences, the best and cheapest of the future, or should they be abolished?"

Mr. Beadle.—According to my notion fences are an abomination. I do not think we are under any inconvenience at all without them, and the quicker we get rid of them the better. In the first place they are an expensive institution. I wonder if any farmer ever counted the expense of his fence for twenty-five years, or multiplied to find out what it costs the towns in the counties, for the maintenance of the fences. You are taxed to keep up fences, and to keep out other people's cattle. The innumerable cross-fences, that are to be seen on some farms throughout the country are wholly unnecessary.

There is a plan of a movable fence, that will fence in your stock, which can be built on any farm and which can be put on any portion of it for pasture purposes. You can move the fence to any part. I think it is far less expensive than the present system. Mr. Beall took an excellent view of this question, and once made a careful estimate of the costs. I think it was put in one of our reports; perhaps Mr. Beall, will be able to tell us what he made out the cost to be. It is perfectly astonishing that we submit to it. We must let every man know that he must take care of his own cattle. That this thing can be done has been demonstrated by our neighbors in the United States. The first move was to allow each municipality to have cattle run at large. They tried that for a while and found no municipality mean enough to order the fence to be kept up. Some years ago I happened to be in Chatauqua and noticed there were no fences on the road alongside of wheat fields and vineyards for miles. No fences, and the people wanted to see no fences. I asked them did they find it to work well; they said yes, with all but a few cantankerous people. Get rid of these unsightly fences.

Mr. Beall.—The secretary taxes my memory too much, I can't remember the figures. I remember that I was surprised very much at the figures I first obtained. I went to work and whittled them down, and in spite of all I could do, I found the figures something enormous. I found that any farmer with an ordinary number of fences, on a hundred acres of land, could better maintain a man to look after his cattle, than maintain the fences. There is no doubt that the fences are a great nuisance in Ontario. Any man has a right to keep cattle, horses and pigs, but he should take care of them. Another great evil, of fences, especially rail fences, is the immense snow drifts collected by them in winter time. With proper management you could secure with little cost a properly constructed windbreak, instead of a fence. I have found that if the money spent on fences, merely for keeping fences not really necessary, were expended on windbreaks, there might be a surplus left. It might have amounted to hundreds of dollars. Fences cost too much for one thing.

Mr. Wilson (of Seaforth).—There is another point on this fence question that has not been touched on—the amount of land that is not used that could be used. The fence around a farm occupies a large area. Another point strikes me, viz:—They are the greatest breeders of weeds. (Hear hear). Weeds grow enormously around these fences. Taking everything into consideration in connection with fences and the amount of ground

they occupy, there is a great loss. Another evil is the blocking of our roads with snow in winter. If we face this question carefully and agitate it, that would be a step in the right direction, and the abolition of our fences would follow. It would pay even supposing every farmer kept a man to look after his stock.

Mr. Scott (of Michigan, United States).—I would add that, in our town, I think in five years the fence will be an exception on the roadside.

Chairman.—What do they do in regard to live stock?

Mr. Scott.—They have moveable fences, to a considerable extent.

Mr. A. M. Smith (of St. Catharines).—The fence is a great harbour for mice, and they destroy a large amount of fruit trees, and it takes a considerable amount of money out of the pockets of nurserymen.

Mr. Wright (of Renfrew).—We have a great many difficulties. These fences, I have always thought expensive and entirely useless on a farm. I have noticed in the Province of Quebec, where the people are supposed to be poor, what an amount of fence they have. If we went to work and put cost on one side, and the argument of the fence on the other, we should find the balance tremendously against the fence. There is interest, there is money invested, and there is labour to keep these fences clean and in repair. I have no doubt if we put it in that way there would soon not be any fence at all.

Mr. Jarvis (of Stratford).— There is what they call a hard law in our own country. That is to compel parties who keep cattle to make their own fences, and keep their cattle within bounds. I consider every man should have wire fences, and if he wants to keep cattle, let him fence them in. Now, if any of you have travelled in other countries and noticed the beautiful landscape, the lovely farms and the beautiful crossings, with nothing to mar or depreciate the beauty, you do not see these miserable snake fences, all for the old feudal idea of fencing out other people's stock. It certainly seems to be about time that we took this matter in hand and tried to abolish fences. In doing this we should be abolishing weeds ; we should make the country more beautiful by throwing open to the view of strangers, our attractive fields.

The Vice-President.—Can you suggest anything to bring that about?

Mr. Jarvis.—Since the matter has been discussed a great many people have changed their minds, and are in favour of no fence. Last year we became a city, and we have a cow by-law. The city has also a goose by-law. Some old ladies appeared the next session after this by-law had been passed, and the members of the corporation caved in, and the goose by-law was not made imperative. I am glad for friends interested that I do not belong to the City Council. However, after the next election they had the courage to put that by-law in force. Now, if we keep geese we should take care of them. I think if we keep up the agitation before the farmers, in three years in the County of Perth there will be very few fences. I am just going to remark that, in the town of Stratford, the moment this by-law was passed, and the City Corporation had the firmness to stand to it, a great many old fences went down on our streets, and if we took a stand in the country a great many old fences on our roads would be obliterated. A great many people would have their gardens and lawns entirely free from old fences, and put a single bar up for protection, and the beauty of this would have such an effect that the next year one half of our city would be protected merely by an iron bar. I trust it wont be long before we shall throw our lawns open to our streets.

Mr. Beadle.—I am going to take the part of the poor man. Just look at it for a moment. There are some poor people without pasture land, and they have a cow, and the cow destroys the trees of other people, because they have no fence.

A Member.—That would be good for the Nurseryman!

Mr. Beadle.—That is the argument I have made out of it. It is the misfortune of the township in which I live. We passed a by-law that everybody must take care of his own cattle and need not keep fences. We were besieged with the argument in favour of the poor man's pig. The Council rescinded the by-law and in bringing this matter up we looked on both sides of it. It would not be right for a municipal council to pass a by-law allowing cattle to run over the streets. We should, I think, get the legislature enlightened

upon the serious detriment of keeping up these fences. If lot owners in towns and villages would keep up the pressure upon the representatives to get such a law passed, as I have suggested, it would make country life more enjoyable.

Mr. A. A. WRIGHT.—I would just say the same argument arose in our town, respecting the poor woman's pig and rich man's pig, also. The rich man made a great plea for the poor man's pig. It was for his own pigs (laughter) running over the streets. The rich man came up to the council and said that these poor people were not able to take care of their pigs by having a place for them. The Mayor got up and said. "We are not going to tumble to the racket," and the by-law was enforced. The High School Board (it is a union Board) offered the school boys for every pig they succeeded in catching fifty cents in money. Every pig in town was impounded. There was a general "how-do-you-do," over it, but there were very few pigs to be seen after that. The Board of Health had no trouble from pigsties either,

Mr. BEALL.—Since leaving home a friend said to me, when I was talking about cattle, that he had information a short time ago from a very clever lawyer with regard to passing by-laws respecting cows in corporated towns through which railroads run. The law already provides that no cattle can run at large. I think we have a lawyer with us. Is it a fact or not?

Mr. MORTON (of Wingham).—I am very sorry I was not in at the beginning of this discussion, in order to hear what points were submitted. I can go no further than the one point I mentioned at the Woodstock meeting. At that time I cited a case that would decide the point brought up then. The matter, however, was sprung upon me at that time. A misapprehension may exist in this Province, and more wide-spread, perhaps, as to the position of people keeping cows, and allowing them to run upon the highways. There is no law preventing any other animals than those mentioned in the Municipal Act from running on the highway. If there is no by-law passed they can run. A great many people presume that they are prohibited. There is no such law and they can run upon the highway, but they must keep them there. I may leave my fence down and any animal allowed to run by permission, if trespassing upon my place, by the present by-law, I can impound; just the same as in the case of the by-law prohibiting. There is a case, Crow *vs.* Steepes *et al*, which I will read:—

CROWE vs. STEEPES, *et al* 46 Q. B. 87.

A municipal council by by-law, passed pursuant to the Municipal Act, enacted that certain descriptions of animals (naming them) and all four footed animals known to be breachy should not be allowed to run at large in the Township, and provided for fixing the height of fences. The plaintiff's cattle strayed from the highway into the lands of defendant, Williams, whose fences were not of the height required by the by-law. He distained them, and they were impounded.

Held, that as the by-law did not affirmatively authorize these cattle to run at large by negatively providing that certain other classes of animals should not be allowed to do so, the plaintiff was liable at common law and under R.S.O. Chapter 195, for damage done irrespective of any question as to the height of the defendant's fences.

I have examined the by-laws of the Municipal Act in the Province of Ontario, and out of these there are only two that allow the animals to run, the others are purely prohibitory. They simply say "shall not run." A by-law must be passed, otherwise they cannot travel on the highway. Our respective Secretary is one I really find taking the poor woman's part. If I own any property, what right has anyone, simply because of poverty, to allow his or her animals to trespass and interfere with that property? I don't think the poor man has any such right. As far as our town is concerned, I may say this: I left my gates open when the by-law was enforced, and one day when I hadn't much to do and I hadn't much to lose in the garden, some cows got in and I walked them to pound. I wanted to make a test case. I heard that the owner consulted a well known solicitor, but there was nothing said about it. I would like for this Association to disseminate as fully as possible the intentions and the ideas we entertain in this matter. I may say you could not distrain the animals. The animals come in the gateway, and unless damage is done, you

cannot distrain. The cows in my vicinity are of that kind which have sense enough to come in late at night and leave before daybreak. If a prohibitory law were passed, such as I know is in force in the State of New York, I think it would be a step in the right direction. The fruit growers' should ask our representatives to get further legislation in that direction. While upon this point, I might mention one thing: the law requires land owners to maintain line fences between themselves and their neighbours.

A MEMBER.—Can a municipality pass a by-law in regard to that?

Mr. MORTON.—I think not, speaking from recollection. The general law provides there shall be a line fence.

Mr. DOWNS (of Stratford),—There was a thought came into my mind with reference to the sparrows. I am not an enemy of the sparrows. There are a good many gentlemen present, who have been in the old country and have seen them around the fields.

VICE-PRESIDENT.—That is wandering from the question.

Mr. DOWNS.—I have reference to the fence around the wheat field. We find about two rods from the fence that every head of grain is stripped clean by the sparrows. The sparrows very seldom light in the middle of a field. Sparrows are short in flight, and I hold the fence is a great harbour for them. In the old country, for two rods around the fence, the grain is destroyed. I think in the city of Stratford it would be a great benefit to have the fences permanently done away with. There is supposed to be about fifty miles of streets, I should judge, and I have a pretty good knowledge of what fences there are in fifty miles. I would say, if I am not mistaken, that there would be 528,000 feet of fence. Put down that fence at fifty cents per foot, a low estimate for a fence. I find, at fifty cents, that it would cost $264,000 to put it up. Average this for fifteen years or, say, three or four years, and see what it would amount to. It is said that the cows would come in and destroy the trees; I rather doubt it. I think if the fences were down some would beautify their places, and it would certainly tend to stimulate action in that direction and increase the planting of trees. I hold that a person beautifying his place is a great stimulus to his neighbour to do the same, and therefore I think it would have an effect to increase sales.

Mr. WOOD (of Stratford).—I could say I perfectly agree with Mr. Downs. It would be much better for the nurserymen and other men.

Mr. GOVENLOCK.—I would like to say that the boys are very fond of beautiful grapes, and the fences being down would tempt them to take some.

A MEMBER.—The boys would go where there are fences.

Mr. MORTON.—Yes; the boys like to climb over the fences.

ORNAMENTAL TREES AND SHRUBS.

The second topic taken up was, "Ornamental Trees and Shrubs Forest, Trees and Hedges, for protection and shade."

A. M. SMITH (of St. Catharines)—I like ornamental trees and shrubs, and especially hedges. A good many fence in their places with trees which act as wind-breaks. This stops the snow and protects our plants. In the Niagara district, especially during the last two or three winters, there have been thousands of dollars of grape vines lost, as well as other varieties of fruit, through the want of protection to their roots. The roots have been frozen and killed. This was especially true in regard to the grape-vines. I think the Quince, Red and Norway Spruce are about as good as any hedge or wind-break. Then there is the White Cedar. We have noticed that snow has been a protection to currant bushes from the frost. One particular instance I noticed last season in the grapery; a row of grape bushes had retained snow on the vines, and in that portion of the vineyard I did not suffer from the loss of a vine last winter. Where these currant bushes had been met by a full sweep, they were very much injured. Anything in the line of hedges or evergreens is the best thing I know of to gather snow.

The VICE-PRESIDENT.—You recommend Norway Spruce and White Cedar?

Mr. SMITH.—I recommend Norway Spruce; I have not used any White Cedar.

Mr. DENTON (of London)—I like beautiful hedges. If we had nice close hedges we could do away with the fences altogether. It would be nice to have hedges between farm and farm. I agree with my friend, Mr. Smith, in the matter of hedges as a wind-break. I understand from a hedge it is a cover. We have hedges as fences. I have seen Osage Orange and White Thorn used. Then there are ornamental trees of which the Spruce is to my mind the most useful. There is, however, nothing more beautiful for ornamental purposes than the Maple. In London the shade trees are nearly all maples. The Soft Maple I think is beautiful. I also like the Mountain Ash. It is an elegant tree when it is grown and branched out. Evergreens, to my mind, are always beautiful; I love to seem them in winter.

The VICE-PRESIDENT.—We want to find out the capability of this section, with regard to ornamental trees and shrub hedges. We would like to know what kind you find hardy?

Mr. JARVIS.—We have had plenty of locusts, but after some years they were riddled with worms. The Maple should not be interspersed with other trees. I find the Oak is a very hard grower, although it requires a little more care. A few Oaks, a few Hickories and Basswoods, are really beautiful. The European Linden looks very nice. Some 25 years ago I planted a great many Walnut trees, and these trees are now very large trees, and in a short time will be fit to make into lumber. In the meantime they are bearing very luxuriantly. A great many Butternuts existed some years ago, but many of the trees are dead. The butternuts throughout the town bore pretty good crops until seven years ago. Black Walnut trees bear abundantly in this part of the country.

The VICE-PRESIDENT.—Have you planted the Horse Chestnut?

Mr. JARVIS.—Yes; we have some magnificent trees in this part of the country. There is another tree I should mention, the native Elm and European Elm—trees that are generally overlooked.

Mr. LAWRENCE.—Insects destroy the leaves of the English Thorn and it does not stand the spring frost.

Mr. BEALL.—I find these ornamental trees first rate for shade. For fields or for farm use there is nothing like trees. We want something which prevents the winds from circulating too freely; you want the farm somewhat screened from the wind, and if you have a cluster of trees, or a long avenue, the snow will be more evenly distributed, and you will have better protection for your cattle. There is nothing equal to the Norway and the Native Spruce for this purpose.

The VICE-PRESIDENT.—Hedges of small shrubs get heavy with snow and droop and the snow drifts with the wind.

Mr. BEALL.—I believe above all other trees, the Black Walnut stands prominent. It bears a large quantity of nuts, and makes a beautiful tree. Any man that has ever had a Butternut or Walnut tree will never be without them. The Walnut will grow anywhere in Ontario—I believe in any part of Canada; it will grow in a much colder climate; it will grow in Norway and in the Highlands of Scotland.

Mr. HILBORN (of Arkona)—I think a great deal of the Scotch Pine for a wind break. There are two or three hundred on our place, and they grow to be a tree in half the time of a Spruce. I don't know how they will succeed after they get old.

Mr. DENTON.—One tree mentioned is a perfect failure, as it is a breeder of insects; that is the Locust. I do not advocate it on account of the borers, which tend to bring about the destruction of the other trees.

Mr. JARVIS.—Ours have been destroyed here. There is one tree not mentioned, that is the Purple Leaved Beech. It is a very pretty tree, and is well adapted for the lawn. Two or three varieties of trees set off a lawn effectively.

Mr. JARVIS.—Do you grow it in London, Mr. Denton?

Mr. DENTON.—It grows in our cemetery. Cut Leaved Birch is also a lovely tree.

Mr. MORTON, at this stage, explained the legal points on the previous question "The Fence, etc.," by quoting the case of Dantes vs. G. T. R., and reading from the Ontario Report of Appeals, page 476.

The convention adjourned at 12.30 for dinner.

THE QUESTION BOX.

The afternoon session was begun at 2 o'clock. The following questions were put in and answered as follows:—

QUESTION.—Suppose you graft a scion of a tender tree on a hardy tree, will it make the graft hardy?

Mr. BEADLE.—The answer to that question, is no. It does not change the nature of the scion, if it is tender.

QUESTION.—What is the cause of the plum blight?

Mr. BEADLE.—If I understand it right you refer to the plums falling. So far as I have observed it is caused by the growth of fungus upon the leaf. I should say that the roots of the fungus feeds upon the leaves and therefore destroys their vitality.

TREE PLANTING, ETC.

The next topic taken up was the topic of "Tree Planting on streets, road sides and school grounds, and Nut-bearing Trees suitable for this section."

Mr. WOODS—We have several agricultural societies, etc., and through their influence we have an Arbor Day. We have a great many trees planted. It is remarkable the advance that has taken place, in tree planting in six or seven years. It is barely forty years ago since this place was covered with the original forest. We have some fifteen walnut trees of the variety generally grown in this place, which I think were planted in 1850 or 1851, and several of the trees are from fifteen to eighteen inches in diameter. We all agree that monotony should be avoided, and I have myself tried the experiment of planting the Sweet Chestnut, as well as the Walnut. I have had two planted for six or seven years, and they are perfectly hardy.

Mr. WOODS.—I think we ought to urge in this country and the United States, the desirability and feasibility of planting trees, and we should plant as far as possible the ordinary trees of the country.

Mr. BURRIT (of Stratford).—This place is small and we can't boast of a large amount of land set apart for park purposes. We have a park of four or five acres. I am sorry, however, to see so little interest taken in this matter.

The VICE-PRESIDENT.—What varieties have you planted in your park?

Mr. BURRIT.—We tried the Horse Chestnut for one, but every one died.

The VICE-PRESIDENT.—Have you a good many trees through the cemetery?

Mr. BURRIT.—We have a good many soft maples. The difficulty here is the trees are not properly set. The people have planted them so close together that they will have to cut them out, and that cannot be done with uniformity.

Mr. BEADLE.—I would make one suggestion. A word was said not to confine ourselves to one variety. I quite agree with that idea. My idea of beauty, and also taste in the matter, is the proper development of each kind, and plant the kinds to themselves. Take an avenue and plant it with Horse Chestnut. If you have an avenue for maples, plant all maples. If you plant the trees a proper distance apart, you will have avenues beautiful in symmetry. I wish Mr. Goldie would speak on this matter, he has had so much experience.

The VICE-PRESIDENT.—I think that point cannot be too much considered in planting our streets. Whatever you are going to plant in one street, plant all of the same kind of trees. I have illustrated that very well around my own ground. I planted a large number of varieties of our native trees around my own grounds and they don't look anything like as well as if I had planted one variety.

Mr. DOWNS.—Do all the trees require uniformity of depth?

The VICE-PRESIDENT.—I think they do.

Mr. GOLDIE.—I think there should be a by-law to regulate the planting of trees a proper distance apart. They should be separated by about twenty to thirty feet. You

can in almost every city or town find trees from eight, ten, or twelve feet apart. You look into the future and see what they will grow to. If you do not keep pruning them up, some will be sure to be killed out. The great aim in tree planting on the streets is to plant all of one kind and at the same distance apart, with the same distance from the line or the sidewalk. That will make a beautiful street. The best tree for the street, where there is plenty of room, is the Elm. I was in the city of Utica last summer and some of the streets were planted with elms. One of the streets was like a grand dome, a regular arch; but unfortunately, as everywhere else, they had planted them too close. The next tree is some variety of the Soft Maple; I think there is nothing grander in foliage. In the fall they colour up so beautifully. I have always looked upon the Sugar Maple as a fine tree. You don't want a tree on the street to be too thick; if it is spreading and thin, it gives a much better shade. You notice in Toronto that the Horse Chestnut has been planted; but it is not a tree suitable for the street. I should recommend smaller shrub trees and give them plenty of room. I do not like to see natural beauty deformed or stunted. There is nothing gives a better impression than to have suitable trees and and shrubs planted, and allow them plenty of room. To grow in small grounds, I can recommend some of the varieties of Cedar. The White Cedar, for instance, is very beautiful. Shrubs of all varieties and grown in all situations, are very beautiful. In a climate like ours in this part of Ontario all hardy things will grow, but do not crowd them together.

The Vice-President.—What about nut-bearing trees?

Mr. Goldie.—Hickory doesn't grow.

The Vice-President.—Have you tried Black Walnut?

Mr. Goldie.—They are grown in the College ground.

Mr. Woods.—The only way I can understand that the Black Walnut does not grow is because of the rock so near the surface.

Mr. Goldie.—There has been none planted except in the College grounds.

Mr. Jarvis.—Some thirty years ago, when I was planting trees around my first residence, we got walnuts somewhere about London. They were not grown from the nuts; they were shoots from other trees. The trees are growing splendidly, and they will soon be fit for timber. I planted several dozen, and they are all living. When I planted my new garden I got some trees from St. Catharines. I planted them and, after being planted some time, I came and took one up and replanted it. It has borne over a half bushel of walnuts. As far as my experience goes there is no trouble with trees, either from the nursery or from the nuts. The Butternut in this country grows without any trouble, but it is not quite as pretty a tree as the Walnut. With regard to Mr. Goldie's opinion of the elms, I think they are exceedingly fine trees.

The Vice President.—Which Elm would you plant—the native Elm?

Mr. Jarvis.—I have some European Elms, but I really like the native Elm far better. I think the natural growth is more beautiful. In connection with my own planting, there is one tree which has been overlooked, that is, the native Wild Cherry. It is very nice. I have one, and we get enough cherries to make lots of cherry cordial. The Wild Cherry makes a very pretty tree. I have also planted native White Ash, and as I have said before, I have planted Basswood. I hear that near Woodstock there is a grove of that kind of tree; at any rate, we have Basswood honey. If a bee gets one suck of Basswood it is delighted. (Laughter.) When the Basswood is in blossom it has a beautiful scent. If I were asked to name the trees I liked best, I should say, the Elm, Black Cherry, Wild Cherry and White Ash. On Arbor Day it was amusing to see people running along in squads. Holes were dug three or four inches deep, and a man came along and put the trees in. There is no use of having an Arbor Day unless the trees are selected, nicely planted and taken care of.

Mr. Wright.—The varieties that we grow in our section of the country so far north are not exactly the same as those you grow here. The principal varieties there are the different kinds of maples—Hard Maples—which, of course, you have here. Soft Maples, which you have in abundance, and the Red River Maple, which is a very beautiful tree and a very rapid grower. We have more difficulty in getting the Hard Maple to grow than any other tree. The Soft Maple is very beautiful when the frost touches its foliage.

it changes into such varieties of colour. The Red River variety, especially, is a rapid grower. I quite agree with my friend the Secretary this time that we should confine ourselves to a variety; and with respect to space I quite agree with my friend, Mr. Goldie, that twenty-five to thirty feet is a proper distance to plant trees apart. Another tree is the Elm; I thought so much of it, and I planted so many around my grounds, that I have named it "Elmhurst." I received favourable impressions from the Lower Lachine Road from Montreal, near the old Fraser estate, where you see the branches interlock. It is the finest drive I ever saw. The tree is perfectly hardy and you get it anywhere, but it is not a very rapid grower. Another tree, the Basswood, is really beautiful. There are some beautiful specimens growing around the English Church in the City of Quebec. So far as Black Walnut is concerned, I know nothing about it; we have never attempted to grow them in our section. Butternut is a native of our section. There is what we call the Bitter Walnut, which produces an ordinary bitter nut. The Hickory tree, which we sometimes call the bitter walnut, is magnificent looking in its second growth. For an ornamental tree it is really beautiful.

Mr. SCOTT.—Have you got the Round Elm? It is the tree above all others. My farm is the Elm Fruit Farm. I have half a mile of Elm trees planted, and the rows of Elms in front of my place have doubled the value of my place. I had a man from Chicago offer me double what it cost me.

The VICE-PRESIDENT.—What other trees have you?

Mr. SCOTT.—On one side I have ornamental trees, and the Black Walnut grows wild.

Mr. DENTON.—What is your soil. I should understand it to be a strong soil?

Mr. SCOTT.—It is.

Mr. DOWNS.—Is the Russian Mulberry a suitable ornamental tree?

Mr. BEADLE.—Some gentleman in London fruited it, and it was very beautiful, and the fruit valuable. The trees we have in this country are all from the trees brought us. There is a great variety of Russian Mulberries.

Mr. WOODS.—Mr. Jarvis has one he fruited here.

Mr. BEADLE.—I look forward to the time when we shall get hold of a good variety, and by protecting it as we do our apples and pears, we may succeed, and get mulberries as good as the English Mulberry. Englishmen have seen it at home and know that it is very valuable. I trust we will succeed in having the Russian Mulberry grow farther north. It is a pretty looking tree. Meanwhile we must have patience.

Mr. BEAL.—For tree planting on the roadside, I should say plant Walnuts.

The VICE-PRESIDENT.—How far apart?

Mr. BEAL.—The statute says thirty feet, and all trees can safely be planted at that distance. Some of my friends are not satisfied to put them thirty feet apart, but put two in that space and afterward they will cut the middle one down. I would advise you to plant this tree, not because it is the most beautiful tree, but because it grows very rapidly. It will make in ten years a larger and more handsome tree than the Maple in thirty years.

The VICE-PRESIDENT.—I hear complaints frequently made against roadside planting, that the roads do not get a chance to dry up after a heavy rain.

Mr. BEAL.—I think the trees planted will do the very opposite; they help to dry the road by absorption. The trees take up a large amount of moisture. If you have a row of trees on each side of a road, it will help to dry that road; there is no doubt about that. I know there is a place in the Township of Whitby, four miles in length, where there is one of the driest roads I know of, and it is planted with trees.

The VICE-PRESIDENT.—The evaporation from the trees comes from the soil.

Mr. BEADLE.—I wish I were big enough to hold all the knowledge and I would be a living cyclopædia. I fully corroborate what Mr. Beal has said in regard to the trees. There are a large number of leaves growing and each one requires moisture, and the moisture comes from the roots. Gallons and gallons of water are required for this purpose. The water a tree consumes is something astonishing. I cannot speak accurately just now how many gallons is required, but it is very many that a tree evaporates in a course of a day. Suppose it is only a few gallons: in a short time a tree will have taken up so much water from the soil by pumping up steadily that the roadside will be dry.

Trees planted on the roadside are a benefit on a warm summer day for the shade they afford, and people will not mind the little mud there may be after a shower. The sooner we wake up to the benefit of tree planting on the country roadsides the better will it be for us everywhere, for our own comfort, our taste and for the value of our property, if we wish to sell it.

GEORGE COPELAND (of Hespeler).—In regard to the question of trees on the roadside, I may say that I know where there was an avenue of trees and the road was muddy from the time the frost came out in the spring until the frost entered it again, but after the cutting down of the trees the mud disappeared entirely. In regard to the planting of trees in school grounds, I may say that around our school house we have one of the finest school grounds that any person can have the privilege to look upon, and there have been planted chiefly maple trees. There are, as well, one or two other trees that take my eye, and one is the ordinary Tamarack; it makes a beautiful tree, especially if the ground is somewhat inclined to be damp. Another one is the Ironwood tree; it makes a beautiful tree.

Mr. GILCHRIST.—Our cities devote $200 or $500 on tree planting and I am certain that 75 per cent. of that money is thrown away. If we had a commission of three gentlemen in this city, who were thoroughly acquainted with tree planting, and who should, for a series of years, continue that work, we would accomplish good results and get value for the money expended. As regards the distance of planting trees, the Walnut makes a beautiful shade tree for the street, but you cannot plant this to have any effect, unless you plant the trees a good distance apart. I passed through Espray, four years ago and saw a Walnut tree, twenty-two years old, planted from the seed. It was six feet in circumference, a foot from the ground. We measured it. For nearly fifteen years the branches had been interlacing. The distance of planting, I think, should depend entirely on the variety, and we should get the distance to plant each tree. One gentleman mentioned the White Ash, but it has a fault. If the frost comes early in the fall, you have a poor tree for the rest of the season. There is no doubt that the streets should be well planted with trees and we should have a universal law. Trees were planted, for instance, in Guelph, eighteen feet apart. I would appoint a commission in all our cities to look after our streets. I like the roads about the City of Washington. I am told that the gentleman who laid them out had taste and ability to do it properly. These streets from end to end are planted with such varieties as are suited to grow in the soil. A commissioner is appointed to look after the streets and parks.

Mr. SMITH.—I object to the Black Walnut for a street tree, particularly where it is planted near the sidewalk. If Mr. Gilchrist owned a small lot adjoining he wouldn't get much good out of his garden. I never saw anything that grows and flourishes as well as the Black Walnut.

Mr. MORTON.—The proper method of planting trees is an important question.

FRUIT COMMITTEE.

Messrs. Jarvis, Gilchrist and Smith were appointed as a Committee to examine the fruits on exhibition.

THE BLACK KNOT.

The subject next discussed was "Black knot on Plum and Cherry trees, its cause, prevention and cure."

Mr. BEADLE.—(Exhibiting a specimen of black knot). The gentleman who sent this here is Mr. Hamilton. He has sent you that black-knot, which was found on one of our ornamentals called Prunus Triloba. It is a very pretty ornamental shrub, loaded with double flowers early in the spring time, and I am sorry to see it is troubled with the black knot.

Mr. GILCHRIST.—With regard to the black-knot, I understand that if we cut it off before midsummer, no doubt we should get rid of it. I think we should look to the appointment of an inspector.

The VICE-PRESIDENT.—Do you not find the law respected

Mr. GILCHRIST.—No; farmers don't take any notice of it.

Mr. DOWNS.—About fifteen years ago, I had some fine plum trees in my garden. I noticed the black-knot first on the Purple Gage. I cut the branches off, and I went on doing this for several years till I got part of the tops of the trees cut off. The result was that the trees died out.

The VICE-PRESIDENT.—What varieties of plums had you?

Mr. DOWNS.—I had Green Gage, Washington, and Purple Gage.

Mr. STREET (of Stratford).—A few years ago, this was the finest section in the country for plums, but the black-knot has destroyed a good many of the trees. I find it spreads very quickly.

The VICE-PRESIDENT.—There is no doubt that some varieties are much more exempt than others.

Mr. DENTON.—General Hand is a tree that always flourishes.

The VICE-PRESIDENT.—It gets a good crop. I am very sorry that we have got so far discouraged that we would make up our minds not to plant any more plum trees. In the first place, we have varieties not subject to black-knot, such as I think the Yellow Egg, Washington, and Coe's Golden Drop. If we would use some care in the matter when we have young trees, and early in the season when the knot is forming, cut it out with a good sharp knife, scrape out all the excrescence and use a little salt, we might prevent the black-knot from gaining ground. By watching young trees you will find you will get over the difficulty. The curculio is not a formidable pest. We use Paris green, and it is very successful. Throughout the United States, our friend from Michigan says, it is used a great deal by the plum growers. I use it a couple of times in the season.

MEMBER.—How is it applied?

The VICE-PRESIDENT.—I usually put a teaspoonful in a pail and fill it half-full of water, and apply at once through a very fine rose. A pailful will spray, say ten full grown trees. I use it just as the young plums are formed. If we have a heavy rain, I apply it again. Our experience is, that after these precautions, we have a full stock of plums.

ADDRESS OF WELCOME.

The Mayor and a deputation from the City Council of Stratford waited upon the Association. The Mayor welcomed the members of the Association in these words:—

Mr. VICE-PRESIDENT,—I appear at the suggestion of our Council, to extend to you a hearty welcome to the City of Stratford. As soon as we heard of your intention of having the winter meeting here, I determined that the council should meet and extend to you a welcome. I may say, we have at least a number of gentlemen who entertain lively recollections of your former meeting some years ago in Stratford. Although at that time tree planting was not carried on to any great extent, I have no doubt that your meeting gave it an impetus, and that we have not been the losers. I need not refer to the antiquity of the process of tree planting. It is mentioned early in history, not only in profane history, but in the Bible; it is mentioned at the beginning of Genesis. Our first parents were placed in a garden of trees, from which they were to get their food. We find the Association, aided by individual efforts, exerting an influence in this important direction. The plan of coming together to exchange notes is a good one. Formerly individuals could not come together in this way. It was almost impossible in former times to get an association together in order to discuss these important subjects. We hope the meeting will be profitable to you all; we have no doubt it will be profitable to us. We intend to do all we can as representatives of the people of Stratford to make you as comfortable as possible. I might, before concluding, refer to what has been done in this city. The council established an Arbor day two years ago, which I hope will become an annual

institution. The first year we planted 1,500 trees, and last year we planted 800 or 900 more. If you walk or drive through the streets of Stratford you will find a great number of the avenues lined with trees, in a thrifty and in a healthy condition. I do not know anything further to say, except that I wish to make a personal remark. I see in your chair a gentleman whom I have known since boyhood, and I rejoice to see he is such an authority in this branch that you have esteemed it advisable to make him your Vice-President. Again, on behalf of the City Council and citizens of Stratford, I welcome you to our city, and hope this meeting will be profitable to all.

The VICE-PRESIDENT made a suitable address in reply, expressing his appreciation of the cordial welcome extended by the city of Stratford to the Fruit Growers' Association of Ontario.

PEACHES AND CHERRIES.

Subject—"Peaches and Cherries, earliest and best varieties for cultivation in this section."

Mr. ESSENCE.—I have not been successful with cherries, although I have always tried to get the best quality.

The VICE-PRESIDENT.—What cherries have you cultivated?

Mr. ESSENCE.—I have cultivated the ordinary red varieties.

Mr. STEET.—In 1877 I ordered some peach trees from my worthy friend, Mr. Beadle, and procured three, Early Beatrice, Foster, and Early Crawford. In 1879 the first tree fruited very fine peaches. In the winter of 1881 it was a very severe winter and the poor tree got its death. The Foster fruited very well, but it died the same winter. The Early Crawford is not yet dead, but has never fruited.

Mr. JARVIS.—I have gone through the mill thoroughly, in regard to peaches. I have tried for the last thirty years to grow them, but I am throwing away time and money. I plant them, and the next year, or the following, they are sure to be killed. I planted some from seed. I had one fine crop of peaches last year, but last winter they were killed to the ground. In regard to cherries, I have grown successfully a large English cherry. I planted these trees on the north side, and they have grown to an immense size. The fruit almost hangs like grapes. In regard to the Early Richmond, one tree last year was partly killed by the frost, but it looks very well this year. The Kentish, if they remain on the tree long enough, are a very good substitute for the English Cherry. In regard to the portion of Manitoba I was in, viz., the Poplar Bluffs, the Little Wild Cherry was infested with black-knot. I was astonished. I went into the woods and examined the fungus, and found that it exists worse there than here. With plum trees I have been very unfortunate. The black knot is not on the Lombard, or M'Laughlin. They are growing to be large trees, and I trust they will be free from the black-knot.

Mr. BEALL.—Have you robins here?

Mr. JARVIS.—We have robins here that rob us all. (Laughter). I wish the Fruit Growers' Association would get the law changed regarding the killing of robins. We really cannot preserve our trees on account of the numerous birds. Last year was a poor year for cherries; there were not enough cherries to make it worth while fighting the robins. Something will have to be done if we want a large crop of cherries. We should allow the boys to shoot them.

Mr. DOWNS.—I would like to ask if there is any advantage in planting cherry trees near a fence; any advantage to be gained regarding protection against robins. I have seen them in the old country grown very successful, trained up similar to the way you train grape vines.

The VICE PRESIDENT.—That is a point I cannot answer, and there is no authority on it. It has not been tested.

Mr. BEADLE.—Mr. Budd and Mr. Gibb speak of some cherries found in the Vladimir district, Russia. They grow about the height of a good size currant bush in that climate. They are loaded with fruit. It is a cold climate, the thermometer falling to forty five

degrees below zero. In the summer time the hot, dry winds are a very severe test. If the Fruit Growers' Association would get some and propagate a few, or say some ten members, with ten dollars each, would send and get some of these Vladimir cherries to try. Mr. Budd says: "It is far better than any of the cherries we have."

About the birds, now; if we throw netting over our trees it keeps the birds away. I have thrown netting over my own cherries, otherwise it is hard to keep the birds away.

I want to throw out one thought about the peach tree, that may be of some use to you. If a peach tree succeeds in bearing fruit, and it is a success, plant from that tree and grow other trees. Let them fruit; you may get some pretty good peaches. You would likely get some a little more hardy. Keep on propagating, and you may succeed in getting a variety of peach sufficiently hardy to endure our climate. There is a limit to peach culture. It may be that you get the winter so cold that the peaches fail to survive. If the trees are healthy, grown well and trained so that the roots are protected, the winter does not often kill the wood of the tree. Last winter the least proportion of any year was killed. We live in hopes that we will get peach trees that will not winter kill. Taking succeeding generations from trees in your locality, you may succeed.

Mr. Essence.—It is very gratifying indeed to hear that, in Mr. Beadle's experience in propagating and getting a hardy class of fruit, he has been successful. I hope the few remarks dropped will encourage others to make an effort in a similar direction. The little I have tested in that way was the only success I had in peach growing. It was suggested by a gentleman that, in order to grow peaches, you should cover them up and protect the roots by tramping snow or ashes, or anything, about them. He was known to have peaches in this way for many years in succession. I was very much pleased to learn that they fruited well. Everything of this kind is encouraging, as a test to show the possibility of growing peaches.

Mr. Beall.—What kind of soil would be suitable for peaches?

The Vice-President.—Light sandy loam soil.

Mr. Wright (Renfrew).—Of course we can't attempt to grow a great deal. The hardiest cherry in Renfrew is the early Richmond. We have three other cherries; one is a seedling sent from the State of Minnesota last year. It stands three feet high; not a single twig was injured and the thermometer went 40 degrees below zero. I have the French cherry; it is a seedling from the coast of Labrador. It was brought by a priest, and it was propagated, and they gave me one of the trees to try. Then I have the Vladimir cherry, but it has not been in my possession long. I grow ordinary cherries by covering the roots with pea straw or manure.

PEARS.

Mr. Beadle.—I call your attention, by the way, to the collection of pears sent here, at my request, by Messrs. Ellwanger and Barry, of Rochester, N. Y. I thought it would interest our people to see the pears, and to notice how they keep. Mr. Beadle explained that the varieties were:—The Lawrence, Josephine D'Malines, Clapp's No. 64, the Beurre Anjou, Winter Beurre Gris, Dana's Hovey, Columbia and Easter Beurre. The difficulty in keeping pears may be avoided by keeping them warm. If they are exposed to the air they shrivel and get tough as a piece of leather. Shut them up tight and do not expose them to the air. There is the Summer Doyenne; I have a good many of those. There is another one, Manning's Elizabeth. For home use there is the Tyson; I like it very much. There is the Bartlett and the Clapp's Favourite. There is an endless variety of pears, and it is a matter of taste which you choose. The Flemish Beauty is a hardy pear and does well. I suppose the most money is made out of the Bartlett. There are localities where the Flemish Beauty has been profitable. The Beurre Clairgeau is a very nice pear.

Mr. Smith.—There is the Doyenne Boussock; it is a good pear.

Mr. Beadle.—Yes; and there are some fine Beurre D'Anjou.

Mr. Scott (of Michigan).—Now, the Bartlett keeps for about two weeks. People find they can't keep it longer. Prices in Chicago and New York markets ranged from

$12.00 to $4.00 in two weeks. For home use the Mount Vernon is a pretty good pear, a very early bearer and about the size of the Lawrence. Does the Flemish Beauty crack here at all?

Mr. Horn.—No sir.

Mr. Essence.—My Flemish Beauty trees, for the last two years, have been loaded down very heavily, but there is no colour to the fruit. I apprehend the reason is too much foliage. I think they are kept from the sun. I have the Vicar of Wakefield, and have taken many prizes with it, although I have only one tree of that variety. I have had it thirty years. There is never a year I have not fruit on it.

Mr. Steet.—My place has a very stiff clay soil. Last autumn my Flemish Beauty for the first time cracked. I attributed that to the wet weather.

The Association adjourned at 6 o'clock to meet at 8 o'clock

The evening meeting was called to order by the President, Mr. Saunders, after which the question drawer was dealt with.

SPREADING MANURE.

Question.—The best method for spreading manure between rows of raspberries?

Mr. Hilborn.—That is to avoid injuring them. The last plantation, I put the plants far apart so that I could drive through with one horse between the rows.

Mr. Scott.—When the snow is on the ground, I take a sleigh, a narrow one, to draw out the manure. In the spring, I take my spading fork and spade it in, thus killing all the little weeds.

MILDEW ON GRAPES.

Question.—What remedies would this Association recommend for the mildew on grape-vines?

Mr. Beadle.—The best remedy I know of is sulphur. The best way to apply it is to blow it upon the leaves or upon the fruit, just as early as you see the slightest appearance of mildew. One of my neighbours says before mildew comes.

Mr. Morton.—I saw an extract taken from a French periodical, and in that article it was claimed that sulphur had been satisfactory in all cases. There is also the kerosene emulsion sprayed on the inside of the leaves, which came into public notice in 1885. I notice a French preparation made up of lime water, mixed with a solution of sulphate of copper in water, forming a bluish paste, which is found a good preventive as well as remedial agent. One application has been found sufficient.

Mr. MacD. Allan.—I have made a practice of using sulphur very early in the season, just as the blossoms are on the grape-vines. I have my grapes training on trellises. I work the soil up, well and sprinkle it quite thickly with sulphur. A few pounds of it goes a great way. I use it again in a small quantity some weeks after, when the grapes are fully formed. I was astonished with the Prentiss grape, that seems to mildew in spite of anything. I have noticed in going through the vineyards of some of the successful grape growers, that their soil was impregnated with sulphur. I have been very successful the last three or four years and have not the slightest sign of mildew.

Mr. Morton.—This is the receipt I spoke about. Eighteen lbs. sulphate of copper mixed with twenty two gallons of water, also six and a half gallons of water mixed with thirty-four lbs. lime. Mingle these two mixtures together and they form a bluish mixture. Apply to the leaves with a small broom, taking care not to let it get on the grapes.

The President.—Throw it on in a semi-liquid state.

Mr. MORTON.—It is in French, but I saw the translation in 1885. They say put it on early, about June. They say it sticks well on the leaves. Frequent showers will not remove it.

The PRESIDENT.—What about the fruit; will it stick on the fruit?

Mr. MORTON.—They don't say that it will be injurious. I would recommend caution and not trust too much to new fangled ideas.

The PRESIDENT.—There is another form of pest I think could be referred to in this question, the Pulvinaria Innumerabilis. Within this white substance is the egg mass of a family of lice. It is hardy in the winter, and sticks on the grape-vine until spring, when they gradually obtain their matured form. The best measure to adopt is to brush them off in the winter. A person going along with a whisk can destroy nineteen-twentieths of these egg-masses. A solution of whale oil, soap, and soda kills the lice as they come out of the egg. They infest Basswood and Maple also.

GARDENS AND LAWNS.

The next topic discussed was, "Gardens and Lawns in city and country."

Mr JARVIS.—If there is anything pleasing to the eye and pleasant to the family it is a beautiful lawn and garden, well stocked. In all these cases, the first thing to accomplish is to have your ground in proper shape, under-drained well and the soil level. I always like to see my sods level. I find that along with grass seeds, you get over-stocked with weeds and among others dandelions. I find it much better to get sod and have the plot properly sodded. After that is done, have it well watered and rolled directly after a heavy rain.

Mr. GOLDIE.—Beginning with ornamental trees and shrubs, there are the fine Japans, which are being generally introduced in the country. Among the ordinary flowering shrubs in cultivation are the different varieties of Lilac, which are very beautiful. For small lawns and shrubberies there is the Cedar, of which there are a good many varieties. They are very beautiful, easily grown and hardy. Mr. Jarvis mentions about sodding and, I think, it would be best for a small piece. For a large piece, say as large as this room, it would cost a good deal to cover it with sod. If you want to make a lawn, begin early in the autumn by raking it up and scraping it level in time to sow it in the month of September. The best grass is the Kentucky blue grass. There is another variety called the Rhode Island grass. I would never manure very heavily. To make a good lawn requires a good deal of labour.

The PRESIDENT.—When you are top-dressing, what kind of manure do you prefer?

Mr. GOLDIE.—Stable manure.

Mr. BEALL.—What time do you prefer to sow grass seed?

Mr. GOLDIE.—I prefer to sow it in August or the beginning of September. The next spring the grass is ready to start.

The PRESIDENT.—Do you recommend sowing anything with the grass?

Mr. GOLDIE.—Oats and sometimes barley in sowing it in the spring, but spring sowing with barley is very apt to kill half the grass. If you sow in summer you do not need to sow anything with it.

Mr. GILCHRIST (Guelph).—There is the Geranium, the new double, which has become very popular, but it generally loses its petals. Another very good plant is the Verbena; it stands a good deal of frost.

Mr. BEADLE.—Do you use Phlox Drummondii?

Mr. GILCHRIST.—Yes, a large quantity.

Mr. BEALL.—Portulacca?

Mr. GILCHRIST.—Yes.

Mr. MITCHELL (Innerkip).—There are certain plants we consider very useful for the masses of our people. There is the Geranium and others already mentioned, but of course I place the rose ahead of anything else. Going over the varieties, I will tell you what I consider the best. If you want a brilliant display in spring or in the early summer months,

take General Jacqueminot, Alfred Colomb and that hybrid perpetual rose, the Marshall P. Wilder. I believe it is not very well known in Canada. You cannot go astray in Marshall P. Wilder. It is equally as good as Alfred Colomb. The Victor Verdier is another perpetual. La France is a capital bed rose and also a perpetual bloomer. It never kills out. For the general masses, as I said before, the Geranium is a valuable plant and very popular. Then there are Gladioli, of which there are so many varieties. You do not get tired of them and they will bear a great amount of abuse.

A MEMBER.—Is there such a thing as a White Perpetual Moss rose?

Mr. MITCHELL.—Yes; there is a White Moss, the Countess of Murinais.

The PRESIDENT.—Explain the term "perpetual."

Mr. MITCHELL.—We use the word "perpetual," but it should be Hybrid Perpetual. It means a rose that is crossed with a perpetual.

The PRESIDENT.—Some would fancy it meant blooming all the time and, looking at the English of it, I am not surprised at such a conclusion, but the fact is they bloom only once early in summer.

Mr. GILCHRIST.—Have you any remedy for the mildew?

Mr. MITCHELL.—I use for the mildew nothing but sulphur. It has already been discussed. There is nothing like beginning in time, and do not get discouraged; I have been sometimes at the thought of losing my roses. I think the main secret is vigilance, and real love for roses.

Mr. JARVIS.—What do you use for the thrip?

Mr. MITCHELL.—Solution of whale oil and soap suds. I put it on twice, and that is all I have done to out-door roses; I have, perhaps, sixty kinds altogether. There is also something like the Saw Fly, a green worm; I think they roll the leaf up.

The PRESIDENT.—That is called a leaf-roller.

Mr. MITCHELL.—I have always been able to fight these things: I have had several writing for information on the matter. If you have any trouble, only write to me and, if possible, I will answer the question.

Mr. BEADLE.—I will ask Mr. Mitchell to write a paper on the subject for the *Horticulturist*. I would say that our friend Mr. Mitchell has struck the key note on flowers. If you want to gain any distinction, you must have a genuine love for the thing in your heart. The Rev. Reynolds Hole says:—"To have a beautiful rose in your garden, you must have a beautiful rose in your heart." Enthusiasm must exist if you expect to succeed in growing fine roses only; with watchfulness and care you may succeed in doing anything well. With regard to some of these rose pests, there are many flies. We have the Aphis, which gathers on the young, tender roots, and with their little beaks, suck out the vitality. For that, I find tobacco water the best remedy. That other, which Mr. Mitchell referred to, the thrip, is a little, white fly; they have two periods of existence; at one period of their existence, they have no wings; whale oil is sure to be effectual if taken in time; soap water has been effectual in destroying them; if you allow them to get large, I find it almost impossible to hurt them with soap water.

Mr. ESSENCE.—I am very fond of roses. In passing my grounds, for seasons you would see it full of roses. One rose, fully ten feet high, was covered with bloom. The rose bushes are always thrifty. The only thing I have to fight against is the thrip. I notice them before they get winged, and capture them with whale oil soap. I have also used successfully, tobacco smoke. You place some sort of cover over the bush, and keep the smoke from escaping. It will kill every one.

Mr. MYERS.—At what time does the thrip come on the leaves?

The PRESIDENT.—Sometime in June.

Mr. MORTON.—I have discovered a new variety of rose. The last two years my rose developed most wonderful foliage, perfectly white. I saw thrip on it, and I experimented to see what would kill it. I tried coal oil emulsion. The first dose, I killed something. I killed my rosebush. I found excellent success in Pyrethrum powder. You can get it for about eighty cents a pound. Dilute it in water, about two ounces to a gallon of water. With this I disposed of the aphis and the thrip.

GRAPES.

The next subject under discussion was,—"Grapes; earliest and best varieties for cultivation in this section."

Mr. Scott.—My experience does not extend much beyond the Early Concord.; I also like the Worden; I forgot to mention the Cottage, and also a white grape called the Lady.

Mr. Jarvis.—I have been growing grapes for many years. I made a great mistake. I first planted the Isabella, and then got the Clinton. It scarcely ripens before the frost comes, and kills all the fruit. It has acted this way for thirty-five years. About seven years ago the earliest grape known was the Jackman. I planted one of the Washington grapes and it covers all the side of my fence. It bore last year very well. The grapes are fine and large. I will say in regard to the Jackman, that it makes good preserves.

Mr. Mills.—Moore's Early ripened before any other grape I had. The Salem and Delaware ripened about the same time. As far as manuring grapes is concerned, I use nothing but ashes.

Mr. Yandell.—The William is my fancy grape.

The President.—It has a larger bunch than the Delaware.

Mr. McCarthy.—I have had experience with the Isabella, and I find it is a failure. Of the Fox grape, I have three vines, and one of them will very soon take in half the orchard. This season we made twenty gallons of wine off a single vine. The Fox is very closely allied to the Clinton, which I also have, and somewhat tender. It is a black grape; a little darker than the Clinton. The berries are about the same.

The President.—Are you sure it is not the Clinton? The Fox grape is a wild grape found more abundantly in eastern cities. The grapes drop before they are ripe. One berry would be enough for any person.

Mr. McCarthy.—I got it from Mr. Stephens under that name. I always considered it a well-named grape.

The President.—The colour of the Fox grape will vary from pink to purple. It is a grape used very little for food. It is, however, the parent from which Rogers got all his hybrids.

Mr. Yandell.—Rogers' No. 4 ripens very well.

Mr. Steet.—I have been very successful with grapes. I have grown Rochester No. 1, and Salem. I have two fine vines; one on each side of the front verandah, very thickly set. I have planted vines, but have not fruited them. I have had the Burnet grape for some years; it has not fruited with me.

Mr. Buckim.—I grow a few varieties, chiefly the Concord, Clinton and Delaware. I do not give much attention to them, and do very little pruning.

Mr. Myers.—I would like to hear if any person had any killed last fall. I have to say as far as growing grapes with profit is concerned, it has proved a failure with me. Except you lay them down and cover them up in the winter, you cannot grow grapes around here.

Mr. Yandell.—I have tried several classes of trellisses. I left one vine above the snow and it was dead in the spring. I have covered up my grapes since.

The President.—My man and I have covered 200 grape vines in a day.

Member.—Do you cover the whole vine or just the tips?

The President.—It is not necessary to cover every part of the vine with earth.

Mr. Govenlock, of Seaforth, had on exhibition, a model of a movable trellis, in which the vines could be laid down and covered up in winter to protect them. He explained the mechanical bearing of the trellis.

Mr. Govenlock.—I like pruning grapes after the leaves have thoroughly left. As far as my experience in grapes is concerned, it may be useful to you. About ten or fifteen years ago I got the Clinton, Isabella, Delaware and Hartford. I find the Clinton running over trees, but they have done very well. The Delaware is, however my favourite grape. I have taken prizes with them for ten years.

Mr. Myers.—Supposing I was planting an acre and a-half of grapes, how would you prepare the soil?

Mr. SMITH.—Dig a drain and use unleached ashes. Be sure to plant the grapes deep enough. In our section grapes were killed the first winter after they were planted, from not being planted deep enough. They were frozen out. The Early Victor, I have not fruited much yet. Moore's Early and Worden are the best blacks for the market.

Mr. SMITH.—For an early white grape, I don't know anything better than Jessica.

The PRESIDENT.—I suppose the varieties you mention ripen at St. Catharines early

Mr. SMITH.—Yes.

Mr. BEALL.—Moore's Early is the earliest I have. The Jessica does not fruit with me.

Mr. JARVIS.—What is the time for Moore's Early?

Mr. BEALL.—It ripens about 20th or 25th September. We had a heavy frost on the 17th October last. I didn't see a ripe grape last year; of the black grapes, none ripened. The Niagara grape ripens about the 25th September; the Delaware and Brighton about the same time. With regard to the laying down of grape vines, they should be pruned, so as to be laid down with the greatest facility.

SMALL FRUITS.

The next topic taken up and discussed was, "Gooseberries, Currants, Raspberries and Strawberries, earliest and best varieties for cultivation in this section."

Mr. LITTLE.—In berries I would mention the Duncan; it is a famous berry. Next to that, May King and the Crescent seedling.

The PRESIDENT.—Is it a good bearer?

Mr. LITTLE.—Yes; a good bearer. The Ironclad is another new variety, which has done very well with me. There are better berries than these, taking the size into account. Mount Vernon, Manchester and Cumberland are all good.

Mr. LITTLE.—The berries that sell best have no white tips.

The PRESIDENT.—Will you mention the best raspberries?

Mr. LITTLE.—The Taylor is a good black cap. The Souhegan is not so valuable as others, on the account of its liability to rust.

The PRESIDENT.—That is, the plants get affected with the rust?

Mr. HOPKINS.—There is another good variety—the Hilborn. I think it is just as large as any of the new varieties.

The PRESIDENT.—What about red ones?

Mr. HOPKINS.—I give the Cuthbert preference in the red berries.

The PRESIDENT.—How have you found the Marlboro' in regard to fruiting?

Mr. HOPKINS.—I have not fruited it.

The PRESIDENT.—Do you think much of the Turner?

Mr. HOPKINS.—It is not as well flavoured as others. It is a very good market berry.

Mr. LITTLE.—The Brandywine, like every new variety, has been lauded up to the sky.

A MEMBER.—I would like to ask Mr. Little what kind of soil he has?

Mr. LITTLE.—I raise my berries upon dark loam. I get good fruit also upon clayey loam.

Mr. MYERS.—The great trouble in growing strawberries is, just about the time a nice bloom is on, the frost in this section of the country cuts it off.

Mr. SMITH.—I grow Fay's Currants. Among the new varieties of fruit, there are but few that fulfil the originator's claims, but this currant is one among the few.

The PRESIDENT.—Did you find the Fay fruit as heavily last year as it did before?

Mr. SMITH.—Quite so; and it grew on one side of the garden in quite a neglected fashion.

Mr. SCOTT.—I haven't fruited it very long, but I think it is the best currant grown for the market.

The Association adjourned at 10.35 p.m.

The President took the chair at 10.45 Thursday, when the discussion of the previous evening on "Small Fruits" was resumed.

Mr. PETERS.—I grow a few of the Cuthbert, and next to it, I would take the Niagara; it is very hardy. I have the Clark; it is a nice berry. It has done well with me. The best fruiter is the Saunders.

The PRESIDENT.—I would like to say for the information of the members, that there were some five or six of these hybrids which had a great resemblance to each other, but there was a marked difference between the time of ripening, and some difference between the ripened fruit. They all have that characteristic of being heavy bearers.

Mr. PETERS.—This berry I have is a very heavy bearer. It bears an immense crop of fruit.

The PRESIDENT.—Have you tried propagating it yourself, and how do you propagate it?

Mr. PETERS.—Yes; I propagate from the tips.

The PRESIDENT.—That is singular. I never found them producing tips in my ground. These hybrids are pure crosses of the Philadelphia raspberry, and Doolittle black cap. The Philadelphia is the male.

The PRESIDENT.—What about strawberries?

Mr. PETERS.—The Sharpless and Glendale have succeeded very well with me. I also have the Colonel Cheney. I didn't succeed with the Manchester or Bidwell. The Crescent Seedling berries are very small.

The PRESIDENT.—Have you done anything in gooseberries?

Mr. PETERS.—My soil is heavy clay. I have large size White Smith. I have also grown the Downing, but it produced a very small crop.

The PRESIDENT.—How does the Downing compare in size with the White Smith?

Mr. PETERS.—It is not quite as large.

Mr. STEET.—I have imported a great many gooseberries from England and Scotland. Our Horticultural Society goes in for the largest. We show our fruit in the City Hall, and we go in to get as many prizes as we can.

The PRESIDENT.—You cultivate the biggest you can get?

Mr. STEET.—Yes; I don't stick to the names. If they mildew I spread coal ashes around them. I like the acid flavor of the gooseberry, and I think with me they do just as well as they do in England.

The PRESIDENT.—I would suggest, if that is the general experience, to plant all English gooseberries and ship them to all parts of Canada. In the London market they generally sell from fifteen to twenty cents a quart. If you can get them here without mildew, I would advise you all to grow them.

Mr. PETERS.—I have grown White Smith for fifteen years, and never had the least mildew on it.

Mr. DOWNS.—I would like to ask what is the best preventive for the mildew. In Downing's Seedling I have no trouble with the mildew, but in some of the larger sorts every one is affected.

The PRESIDENT.—What is the character of your soil?

Mr. DOWNS.—Heavy.

The PRESIDENT.—Is the Lawton Blackberry hardy here?

Mr. DOWNS.—I got one two or three years ago, and I planted it about eight feet rom the fence. The next year I had some very large berries, but only a few straggling canes came up, and finally they seemed to die out.

Mr. JARVIS.—I wish to reply to Mr. Downs, on the Lawton. I am confident if he hadn't a good crop he didn't take good care of it. It is a neighbourly sort of blackberry. I imported the Lawton at the same time as I did the Highland Cranberry. The Cranberries were a failure, but the Lawton I have had ever since. Some years I have had magnificent crops. This last year I had a very nice crop of Lawtons, and they are a fine berry. They require to remain on the bush till they get thoroughly ripe. With regard to raspberries, I have a very old kind. It is the Brinckle's Orange. Year after year we have had splendid crops. They have the peculiarity of bearing a second crop.

Mr. SMITH.—Are the canes hardy?

Mr. JARVIS.—Yes, very hardy. With regard to gooseberries, I have had only one

variety, and I don't know the name of it. I have had it a number of years; I got it from Mr. D. W. Harris, of England. It bears immense crops. For the mildew I use charcoal dust on all my gooseberry bushes. There were a few years I didn't use it and still there was no mildew. Last year, in one night, the mildew seemed to strike all my gooseberries, and I had a very large crop. I believe if I had still attended to the old system of covering them with charcoal dust, I would have had no mildew. I heard that my grandmother kept gooseberries free from mildew by planting them in old charcoal pits. That is the way they planted their gooseberries, and they grew them free from mildew. The last time the Association met here there were some very fine gooseberries shown. There were some immense ones and all free from mildew.

Mr. HILBORN.—There are many newer varieties, several of which I do not wish to say much about. I will give an opinion in one or two years. Many leading varieties have been tested for years, such as Crescent Seedling, which has proved most productive and profitable. The Daniel Boone, Manchester, Wilson and Crescent, I think, would be the best. One of the newer varieties, the Atlantic, is the most profitable I have seen, and I believe it is going to be a good market berry. It is about the size of the Wilson. It is fully firmer than the Wilson.

Mr. SMITH.—Have you grown Parry?

Mr. HILBORN.—I can't say much about it; but I have fruited Woodruff No. 1.

The PRESIDENT.—How is it for size?

Mr. HILBORN.—It is a good large size; not quite equal to Manchester.

The PRESIDENT.—You would recommend it for amateur culture, and not for market.

Mr. HILBORN.—Not for market.

The PRESIDENT.—Suppose you were restricted say to half dozen kinds for general cultivation and for market; what would you suggest?

Mr. HILBORN.—Crescent Seedling, Daniel Boone, Manchester, Wilson, Atlantic and Captain Jack. I have about eighty varieties, most of them have good points.

The PRESIDENT.—Does the Caroline raspberry fruit well with you?

Mr. HILBORN.—Yes; it is a little soft, but will carry well.

Mr. SMITH.—It is a cap?

Mr. HILBORN.—Yes; although a sucker. Tyler is the best early black cap. The Tyler and Souhegan are preferred, although I think the Tyler is a little ahead on my ground. The size of the fruit is just a shade larger. The Souhegan is liable to rust.

The PRESIDENT.—Mr. Little, you have raised some of the newer varieties. The Souhegan—have you ever found the winter to kill it?

Mr. LITTLE.—I have not found the winter to kill it.

The PRESIDENT.—You found this plant (Souhegan) on Mr. Hilborn's grounds last summer?

Mr. LITTLE.—Yes; I think it the best quality of black cap I have seen. It is medium early; not quite as early as Tyler. It is of good size, and is not so easily affected by cold as the Mammoth Cluster.

The PRESIDENT.—Have you any other variety?

Mr. LITTLE.—I have Mammoth Cluster and Gregg.

The PRESIDENT.—Is the Gregg perfectly hardy with you?

Mr. LITTLE.—No, it is not. I planted varieties to come in, however, at different times. There is the Shaffer's Colossal, the best of the many purples. There is none other more hardy and productive. Its colour is against it for a market berry, especially if it gets a little over ripe. I think there is none better for canning or table use, according to my taste.

The PRESIDENT.—What varieties of red raspberries do you prefer?

Mr. LITTLE.—The Turner and Cuthbert.

The PRESIDENT.—Would you put the Turner before the Cuthbert?

Mr. LITTLE.—Yes; the Turner is ahead. It is the hardiest red raspberry I have seen. The Clark is too tender.

The PRESIDENT.—Have you tried the Marlboro?

Mr. LITTLE.—It has large berries; is of a medium quality, but not firm.

Mr. MORTON.—Have you the Ohio?

Mr. LITTLE.—I had the Ohio for several years ; I found it a medium sized berry of very good quality.

The PRESIDENT.—What about gooseberries of the English varieties, the Whitesmith, for instance. How many years have you grown it?

Mr. LITTLE.—Two or three years. I had the Crown Bob, and planted it at the same time, but the mildew was bad on it. There is also the Industry, a very strong grower, and free from mildew.

Mr. HILBORN.—Among the market seedlings, I find Smith's Improved the best. The Downing was very good this year, but mildewed on sandy soil. It was all right on clayey loam. Among blackberries, I succeeded best with the Snyder.

The PRESIDENT.—What about currants?

Mr. HILBORN.—Raby Castle, Victoria, and Fay's Prolific, has fruited two years to a small extent.

The PRESIDENT.—Can you distinguish any difference between Raby Castle and Victoria?

Mr. HILBORN.—Raby Castle is a little stronger, and has a slightly larger bunch.

The PRESIDENT.—What is your opinion about Fay's Prolific?

Mr. HILBORN.—Fay's Prolific is not quite as long.

The PRESIDENT.—What do you think of the Cherry?

Mr. HILBORN.—It is not productive enough.

The PRESIDENT.—Have you fruited Moore's Ruby?

Mr. HILBORN.—Yes ; this year.

The PRESIDENT.—What does it promise?

Mr. HILBORN.—It is the most promising of any of them.

A MEMBER.—What is the size?

Mr. HILBORN.—The size is about the same as the Victoria or Raby Castle..

Mr. DOWNS.—What is the best mode of pruning black caps that grow very long canes? I think last year the canes grew ten feet long. Is it best to let the canes grow so long?

Mr. HILBORN.—The best time to prune them, is when the bush gets two feet or two and a half feet high. It makes a stronger bush. It will stand up, grow more fruit and stand winter better. If the laterals get too long pinch them off. At the time of pruning, pinch off the undergrowth.

The PRESIDENT.—The advantages of that is the plant becomes more stocky and it is not so liable to break off, and will produce a much larger quantity of fruit.

Mr. HILBORN.—It brings about a great many more branches. It is reasonable, that the higher you get up the more liable they are to be killed with the winter. I have many black currants. I like the Black Naples ; but Lee's Prolific which has been referred to has not done very well with me. The fruit has not grown large, and it has not been productive with me.

Mr. SMITH.—My experience is similar to Mr. Hilborn's. I regard the Atlantic and Mrs. Garfield as very good varieties, and with me they did fairly well last year. My experience would differ a little on black caps. I think the claim that the Tyler is a little earlier than the Souhegan is unfounded ; for I had them side by side and could not see fifteen minutes difference in the time of ripening. The only difference I could notice was that I thought the Souhegan was a little the stronger grower. In regard to red berries for market, we have never had anything to beat Highland Hardy.

The PRESIDENT.—Do you find it a strong grower?

Mr. SMITH.—Not quite so strong as the Turner, but fully as productive.

The PRESIDENT.—Do you find it firm enough to ship?

Mr. SMITH.—Fully firmer than the Turner, but not quite as firm as the Cuthbert. There is the Reliance, which is a good bearer. There was a gentlemen spoke about Niagara being hardy ; with me it is not hardy.

The PRESIDENT.—Do you think the Caroline worthy of a more extensive cultivation?

Mr. SMITH.—If there were a demand for yellow raspberries it might be, but I have never found any great profit in growing it. I have the Brinckle's Orange as well, and it is a better flavoured berry. In the matter of gooseberries, there has been some remarks

made with respect to the Saunders. From what I have seen I think it is most promising.

Mr. SMITH.—It is about the size of the Downing.

Mr. COPELAND.—I can say something of the Hilborn black cap, which I have fruited myself. I have many other berries, and after making a comparison, I have concluded that the Hilborn raspberry is really the best in quality. It is not as large as some other berries, but it is hardy. Last winter didn't kill it in the least, while the Gregg was killed back by its side. We considered last winter pretty hard on the black caps.

Mr. SMITH.—What variety do you find the best in blacks?

Mr. SCOTT.—The Snyder is our main crop. I think there is more money in Snyder than any other berry. I can't grow Kittatinny.

The PRESIDENT.—Have you tested Wilson's Junior?

Mr. SCOTT.—Not sufficiently, but I find we have to cover the plants up.

Mr. SMITH.—How do you cover them?

Mr. SCOTT.—I run a furrow along one side of the row, bend the vines over and cover the tips; or I take a spade and go around and remove a little dirt.

Mr. BEALL.—Do you turn the berries from the furrow?

Mr. SCOTT.—I turn them into the furrow; cutting the roots will not affect the berries.

THE QUINCE.

The Quince varieties and cultivation was then taken under consideration, and the following discussion ensued:—

Mr. PETERS.—I have tried to grow them; but cannot succeed. I have never been able to get any fruit yet.

Mr. DOWNS.—I have tried them without success. The only quinces I ever saw were immediately opposite my place, grown by Mr. James. He had a very fine healthy tree.

Mr. SMITH.—We have tried several varieties in our locality; but I have seen nothing yet better than the old Orange. It is earlier than the Champion.

Mr. BEADLE.—The Orange quince is the best variety we can grow. The Champion quince is too late for us. Meech's Prolific was illustrated in the January number of the Agriculturist of this year. It comes into bearing quite late; later than most of our quinces. Apple and Orange are slow enough.

Mr. SCOTT.—The Champion has that peculiarity too. The Orange quince is the only variety we can grow. The Champion is too late; we can't ripen it.

Messrs. Jarvis, Gilchrist and Smith at this stage presented their report on the exhibition of fruits.

AN INVITATION.

Mr. SCOTT.—Gentlemen,—I want to say, as I am about to leave for home, that we intend to hold our June meeting in Lansing, Michigan, and shall be glad to extend a welcome to you all. The Agricultural College is located there and will be a point of interest. I have always deemed it a great pleasure to come to your meetings, feeling we are brothers. (Hear, hear.) I know that the fruit growers of Michigan will do all in their power to welcome you.

The PRESIDENT.—As members of the Canadian Association, we are all very glad indeed that Mr. SCOTT has been with us, from Michigan. We are geographically near them, and we are always glad to have any representatives from the States to favour us with their presence. I hope we shall have, as far as knowledge of fruit culture is concerned, complete reciprocity. I am very glad to see the spirit that has characterized these meetings. We have had a goodly attendance not only last night but all through yesterday, which is in every way creditable to this district.

The Convention adjourned at 12.35, p.m. for dinner.

The President called the Association to order at 2.35, when the following topic was opened for discussion :

APPLES, BEST VARIETIES FOR EXPORT.

Mr. MacD. Allan.—I can speak for my own section only, and shall give the leading varieties that would suit. There is a great amount of money in the Baldwin, and in our western district it is an apple that does very well. It is a regular and very abundant bearer. It is tolerably heavy, and a good size, is a splendid shipper and packs well. The Northern Spy is a splendid apple for the market. The American Golden Russet comes next. The King of Tompkins County is very attractive, and an apple that commands a very high price in the markets of the Old Country. It ships very well ; it is not a very heavy bearer, but does fairly well. It is an apple liable to be blown off by the wind. Wagner is an apple I think more of the more I see of it ; I would prefer it to any other for my own use. It is just the size wanted in the Old Country for dessert, and is therefore an apple with a good deal of value in it for the export trade. There is the Rhode Island Greening, which I believe, for two or three years was cried down in the British markets, but it is coming up again. It stood higher in the British markets this last season. I believe that for general purposes, it is better than the Baldwin. The Baldwin loses its eatable flavour and becomes too woody to be a very good cooker. The Northern Spy, we make a good deal of money out of in the Old Country, although when you have planted out an orchard of trees you have to wait nearly a life time before they come into bearing. It bears very regularly, and crops that pay very well. The Mann is an apple spoken of a great deal, and this last season it brought a really high price. As a shipper, it keeps splendidly, in fact, the Mann is an apple for use towards the spring. This apple, I find, retains its high quality. If you pit it the same as potatoes, on opening the pit in the spring, you will find them good. It is as good in quality as the Rhode Island Greening. If you store them up and ship early in the spring to the Old Country, you will realize a good price. There is an apple not spoken much about ; it is the Cabashea. It is an apple that holds its own in the Old Country markets. It has a good deal of the Baldwin quality ; it is a large apple, fairly well coloured, and commands a very good price. There is an apple called Esopus Spitzenburgh, which is one of the finest apples we have, and of very high quality ; it is not a very good cropper. The Roxbury Russet is a later cropper than the American Golden Russet ; it fetches a good price, but not as high. We have another apple that holds its own, that is the Cranberry ; it does very well in the English markets. Another very good variety is the Ribston Pippin. If you saw the difference between ours and those grown in the Old Country, you would hardly believe it was the same. On one occasion, a gardener near Glasgow, sent me out some grafts. He had received some of our Ribston apples which he said were of a different quality from the Ribston he had. It was different in appearance in every way. The man who sent out the grafts afterwards received some of the fruit from me, which showed the difference in quality was only a question of location between the Old Country and this. We can take trees from the Old Country, plant them here and show an entirely different and superior quality. So there is no question that we have the inside track of the entire world on apples. In foreign markets we have met the apples of Holland and the United States ; but you see that the Canadian apples are quoted from one to two shillings and sixpence higher. The Wealthy is a good apple, and will keep a long time ; it is an apple not inclined to spot ; it is a good shipper. Swayzie Pomme Grise is a nice apple, but it is not one that at the present prices will ever pay the grower ; it is on the small side ; at the present rate, it fetches $4.00. It would require to fetch about $8.00 or $9.00 in order to pay the grower. The Esopus Spitzenburgh is not a profitable apple for the grower ; it is a very great pity, for it is an apple that would command a very nice price in any market.

Mr. Woods.—With respect to this neighborhood, I may say that about thirty years ago we had some very fine Snow apples, but they started to spot some years ago. This year we got some magnificent crops of Snow apples. I think one thing about the Spitzenburgh is, that it is a very difficult tree to grow indeed ; I have tried it three or four times and it has failed. A most remarkable thing occurred in 1881. In that year we had a severe winter. I had a row of trees, in which the Wagner was planted alternately, and

they were the only ones I lost in the orchard. Three Wagners were grown on the side of a hill, and those very trees were the only ones killed. It was mentioned in the *Horticulturist*. In my experience, the Wagners are the worst trees in the orchard.

The PRESIDENT.—What other varieties have you?

Mr. WOODS.—In my neighbourhood, there are Maiden's Blush and American Golden Russet, chiefly.

Mr. FRAME.—I find the Spitzenburgh is a very tender tree. My trees are all dead, both young and old. They bore thin crops.

Mr. JOHN PARKER.—I have been growing a few, and make the most money out of the Golden Russet.

Mr. MCKEOWN.—I have made the most money out of the Baldwin, King of Tompkins County, Northern Spy, and Golden Russet.

The PRESIDENT.—Which would you put first?

Mr. MCKEOWN.—Baldwin and Northern Spy is my favourite.

Mr. SKINNER.—I find the best ones for market are the Baldwins and King of Tompkins County. I find this danger in the Baldwin, that it gets winter killed a great deal. I find the Russets stand very well. The Wagner and Mann apples are very good.

Mr. MONTEITH.—In the southern portion of this county, I think more parties are in favour of King of Tompkins than any other variety. They appear to command the very best local prices in Stratford, and in my own opinion it comes first, and the Spy next. As to the Baldwins, I don't like them.

Mr. O'LOANE.—The Golden Russet, Baldwin, Ribston Pippin, Northern Spy and Greening, seem well suited to this part of the country.

The PRESIDENT.—Is it your opinion that the fruit industry might be extended?

Mr. O'LOANE.—I think it might be extended with profit.

Mr. DEMPSEY.—I would like to ask Mr. Allan, what does he think of the Yellow Bell Flower?

Mr. MACD. ALLAN.—It is not a very good apple.

Mr. DEMPSEY.—Our experience is that it is a very good apple.

PLUMS.

The next topic taken up was "Plums, culture and the best variety for this section."

Mr. UHBELACKER.—I believe I am called a crank on plums. Be that as it may, I have grown a great many varieties. In 1881 most of the best varieties were killed. I grow some of Pond's Seedlings, Glass Seedlings, Yellow Egg, Washington, Lombard, Smith's Orleans, and Coe's Golden Drop. My plum orchard is getting very straggling, although the trees are growing without black knot.

The PRESIDENT.—What are the best plums?

Mr. UHBELACKER. Pond's Seedlings, Washington, Yellow Egg and Lombard.

The PRESIDENT. Do you grow McLaughlin?

Mr. UHBELACKER.—Yes; we had a fine crop in 1884.

The PRESIDENT.—Does the Glass Seedling keep free from curculio?

Mr. UHBELACKER.—It is curculio proof.

The PRESIDENT—Can you sell it well in the market?

Mr. UHBELACKER.—Yes, very well.

The PRESIDENT.—Have you found it a good bearer?

Mr. UHBELACKER.—Very good.

The PRESIDENT.—An early bearer?

Mr. UHBELACKER.—We have had three crops off it, after some nine or ten years. The most profitable plum is the Lombard.

The PRESIDENT.—Have you tried Yellow Gage?

Mr. UHBELACKER.—Yes; but before the fruit gets ripe, it rots. The very best plums are the Pond's Seedlings.

Mr. HARRISON.—I grow the Yellow Egg, Washington and Blue Egg. I have kept the black knot off them.

The PRESIDENT.—Do your Washington trees bear heavy crops?

Mr. HARRISON.—No, Sir.

Mr. WOODS.—I had a good deal of black knot, and tried the well-known plan of the knife. I found cutting it out thoroughly, and applying shellac dissolved in alcohol, two or three times, to be a good remedy.

The PRESIDENT.—That would be a suitable remedy to prevent fungus from spreading.

Mr. WOODS.—I tried coal tar, but it did not affect the curculio. I have tried to catch the worm.

The PRESIDENT.—You would have to get up early. I have jarred the trees at midnight, and found them active.

Mr. STEET.—Do they work at night?

The PRESIDENT.—Yes, and in the day time too.

Mr. STEET.—I have grown plums a great deal and very successfully; I have grafted a number on wild plum stocks. I have grown all kinds, the Washington is a very prolific bearer here: it is a very fine plum, but its bears heavily only once in three or four years.

The PRESIDENT.—What has been your experience with the Bradshaw?

Mr. STEET.—It is a very good plum. We did very well until the black-knot came along; previous to that they were borne down every year with fruit.

The PRESIDENT.—Have you grown Glass Seedling?

Mr. STEET.—I have some Glass Seedlings that were sent out by the Society. I don't think a great deal of them; they are not very good bearers.

Mr. BUCHANAN.—I have the Washington, Glass Seedling and Imperial Gage.

The PRESIDENT.—You find these three varieties succeed well?

Mr. BUCHANAN.—Yes.

Mr. UHBELACKER.—Pond's Seedling or Smith's Orleans have never had the black knot, The Lombard is the worst with us in that regard.

Mr. JARVIS.—Pond's Seedling and Imperial Gage—I have these without black knot. The Lombard has the black-knot.

CRANBERRIES AND HUCKLEBERRIES.

"Cranberries and Huckleberries; would it pay to cultivate them?"

Mr. WOODS.—I don't think cranberries and huckleberries would pay. Five miles from here in the centre of a swamp, is what is known as the huckleberry patch all over this country. Hundreds visit it; indeed, so great is the rush, and the season is so long, that the Railway Company sends out a car and leaves it there on a side track; there is the station and tickets are issued to huckleberry pickers. People go out in hundreds from South Woodstock, and I don't know from how far. People come even from Waterloo County.

Mr. STEET.—I think the cranberry is a very good fruit; it is very nice for pies and puddings.

Mr. BEADLE.—In Ontario both the cranberry and huckleberry grows wild. I may state, that a gentleman in Michigan, named Staples, says huckleberries can be cultivated in gardens. The High Bush cranberry we use, is very different fruit from the cranberry of commerce. The cranberry you buy in the market grows in marshes. It is from a low trailing plant which creeps along in the marsh. The botanist, however, has come to the conclusion, that the High Bush cranberry is the Snow Ball.

Mr. BURRITT.—If the cranberry and huckleberry could be cultivated profitably, I have a swamp that might be turned to good advantage.

Mr. MACD. ALLAN.—You require first of all, a good piece of land. It would never pay to go and plant out bushes on marsh land. To ensure good large crops, it is necessary to have peat land. Take off the top peat early, put three inches of sand over it, and it should be so situated as to be kept free from weeds. You must have a piece of land for no other purpose but for the growth of cranberries.

Mr. WOODS.—Is the High Bush cranberry cultivated at all?

Mr. BEADLE.—Not to any extent; I have grown some, however, as ornamentals.

VEGETABLES, Etc.

"Vegetables, the best and most profitable variety of cabbage, cauliflower, celery, peas, beans, corn, asparagus, turnips, potatoes, etc; how to grow them, and destroy the noxious insects, to which potatoes and the cabbage tribe are subject. Fertilizers etc."

Mr. TRANSOM.—I grow several varieties of tomatoes. The best variety is Livingstone's Favourite. There is also Livingstone's Perfection; but Livingstone's Favourite is my choice.

The PRESIDENT.—What variety of cabbage do you grow?

Mr. TRANSOM.—Henderson's Early.

Mr. PETERS.—In Cauliflower I like Dwarf Erfurt. In celery I like Red Celery, I also grow the White Plume.

Mr. BEADLE.—Do you find it hard to keep well?

Mr. PETERS. It is just for summer use. In asparagus I have a very good plant. I take particular pains in laying the bed out; I clean off the rubbish and put on decomposed manure; I laid it out five years ago, and have had a splendid crop ever since.

A MEMBER.—How do you plant Asparagus?

Mr. PETERS.—About eight or ten inches in the rows.

The PRESIDENT.—In potatoes, what varieties do you grow?

Mr. PETERS.—The Beauty of Hebron principally; it is a fine early kind.

Mr. JARVIS. Asparagus can be planted just as easy as potatoes. In the cutting of Asparagus some people are afraid of beginning the second year. I commenced cutting the second year, and I have cut ever since. With regard to cauliflower and cabbage, I have not grown any lately on account of the nasty worm. During my visit to the North west, I saw a cabbage that weighed forty-two pounds. I suppose you will not believe it; but, it was put on the scales. It was at the Exhibition, in Brandon, two years ago, where I saw a White China Winter radish, weighing thirteen pounds. There were others there weighing from eleven to thirteen pounds.

At this stage of the meeting, the Committee that was appointed on the exhibition of fruits, reported on a seedling exhibited by Mr. Oliver, who wished the society to name it. They reported it as follows:—"Free open calyx, good quality, and well worthy of an extended trial. By far the best seedling on exhibition."

The Society by a unanimous vote named it the Oliver.

The discussion on Vegetables, etc., was then continued:—

Mr. WADE.—I raise Henderson's Early Summer cabbage, and the Drumhead Savoy. The only cauliflower I grow with success is the Extra Early Paris. In celery I have Henderson's Half Dwarf. I think this is the celery I prefer, as it keeps in the winter. On the cabbage I have used air-slacked lime; I dust it on. The only application that was a success, however, was one quarter pound of hellebore, and one quarter pound of slacked lime mixed in water thoroughly. I have kept the cabbages perfectly clean. I have tried numerous cures, and this is the best I have ever got yet.

Mr. HILBORN.—Did you ever try Paris green?

Mr. WADE.—I wouldn't try it on my cabbage. If you try it on cabbage, you try it on yourself.

The PRESIDENT.—A good dose of hellebore would be bad, too.

Mr. WADE.—Not one quarter pound to half gallon of lime on 1,500 cabbages. I have heard of people using Paris green on cabbages.

Mr. HILBORN.—I am acquainted with one grower who thought it was safe to use it, but, he said he wouldn't try it again.

Mr. DEMPSEY.—I have used Paris green on cabbages for over two years. I have used it with plaster of Paris.

COMMERCIAL FERTILIZERS FOR CLAY SOILS.

Mr. W. A. Macdonald (Agricultural Editor of the *Farmers' Advocate*, London, Ont.)—My attention has been directed to a circular relating to commercial fertilizers which was handed around amongst the members yesterday, and I wish to say a word about it in connection with this subject. I see that special fertilizers are manufactured to suit the requirements of all kinds of crops, including fruit trees. For example, on page 10 you see that the special fertilizers for potatoes and fruits contain large percentages of potash. It is true that potatoes and fruits are greedy potash feeders, but this does not always justify the use of potash fertilizers for this crop. Mine is a clayey soil, and I have tried different kinds of potash fertilizers for potatoes, and I find that it does not pay to apply them. For the purpose of ascertaining the reason why, I made a mechanical analysis of my soil, and found that the coarser portion, which is usually regarded as sand, had in it a large percentage of fragments of alkaline rocks, which yield large quantities of potash. This proves that special fertilizers manufactured for certain crops are of questionable value, unless the character of the soil is also taken into consideration. Of course, the manufacturers cannot ascertain the composition of every soil to which their fertilizers are applied, although they can easily find out the composition of the crop, and unless the farmer or the fruit grower can accurately describe the soil when ordering the fertilizers, there is little hope that they can be profitably used. Some manufacturers say that their fertilizers are good for all soils, but this is all nonsense. Some general fertilizers will produce good results on almost any poor soil, but the application will, in most instances, be a wasteful one ; for most soils are deficient in only one or two constituents of plant food, so that the other constituents of the fertilizer are entirely wasted and often produce injurious results. Phosphates are the most deficient constituents in most soils, and you run very little risk in their application, but I would not, as a rule, recommend the use of potash or nitrogen in the commercial form ; if the soil is deficient in these constituents, ashes should be used for the former and farmyard manure or clover plowed under for the latter. I have found by repeated experiments that ashes are useful, or at least not injurious, even when potash is abundant in the soil, while sulphate of potash is injurious to such soils.

A Member.—About what yield of potatoes did you get ?

W. A. Macdonald.—My yield was 350 bushels per acre where I applied fertilizers to the best of my ability ; where no fertilizers were applied, the yield was 265 bushels per acre, and where I applied several mixtures such as are usually found in the markets, of which I did not know the analysis, my average yield was 260 bushels per acre. I shall never again use a fertilizer without receiving an analysis with it, and I shall always order it more for special soils than for special crops. I am confident that fruit growers could make money out of fertilizers if they organized in some way for the purpose of experimenting and learning the results. I assure you I would most gladly co-operate, and you will also have the sympathy of the fertilizer men. It has been said that commercial fertilizers would prevent potato rot, but I have not found it so. I have had an average of about eighteen per cent. rotten where I used fertilizers, and about the same percentage where I used nothing ; but where I applied barnyard manure, there was about forty per cent. rotten. I have over thirty varieties of potatoes, and my favourite variety is the White Star.

The President.—I think caution should be exercised, in the use of fertilizers, lest we arrive at rash conclusions. A few experiments should not be taken as an infallible guide. There are various other conditions, besides the character of the soil, which should be taken into consideration, such as the rainfall, light, heat, etc. We have also, to consider whether the constituents in the fertilizers are stable or not. A few weeks ago, I had occasion to visit the Experiment Station at New Haven, Conn., and I found to my surprise, that large quantities of Canadian ashes were used in the Eastern States, and high prices were paid for them. It occurred to me that if these people could afford to pay such high prices, our people should pay more attention to them, and use them at home. This is an interesting subject, and I think more experiments should be undertaken and reported at our meetings, for mutual information.

Mr. W. A Macdonald.—I don't wish this meeting to understand that I have any particular confidence in the few experiments I have made, and I should not have mentioned them, if they did not corroborate thousands of experiments conducted in other parts of the world. In fact I knew what would be the result before I started my experiments, but I find that it is necessary to demonstrate truths to the farmers in this way; else they come to the conclusion that my teachings are theoretic. I use my experimental grounds as a sort of text-book or blackboard, as it were. It requires no further demonstration to prove that the fertilizers applied should correspond with the natural deficiencies in the soil, and as soon as farmers and fruit growers get this into their heads, they will profit by their investments. Of course your President is right when he says that there are many other conditions to be considered besides the character of the soil, but these are too complicated for discussion here; I was speaking of average conditions.

A Member.—What is the value of ashes?

W. A. Macdonald.—Unleached hardwood ashes contain four to eight per cent. of potash, and two to three per cent. of phosphoric acid, which, according to the present market prices of these constituents, give them a value of eight to twelve dollars per ton, and then you have thirty-five to thirty-eight per cent. of lime thrown in.

Mr. Jarvis.—With regard to ashes. For years all along East Toronto they gathered ashes for the purpose of making potash. Men came from the United States, and bought up these ashes, and took it over and distribute it through their country. We have lying around this town hundreds of tons. Ashes have great manurial value.

Mr. Frame.—As a Canadian farmer I have been growing acres of potatoes for the last thirty years, and making money out of them. I take all sorts and try them for the markets. There is the White Star, which is a fine potato. The Buck Eye is a very good potato, and grows very well in heavy clay land. (The speaker here explained his method of planting potatoes, etc.) The Early Rose and Late Rose has taken the market in the meantime. We kill the beetles with Paris Green. We mix a pound of Paris Green to about sixty pounds of plaster, and take a perforated canister and run along the rows very quickly.

The President.—In planting potatoes how do you cut your seed? Do you prefer them in pieces or single eyes?

Mr. Frame.—Single eyes.

A Member.—Do you ever use manure?

Mr. Frame.—Yes; I always use manure; I always work it well into my land. Nothing has been said with regard to turnips. I think, if you manure in the right time, you will get a splendid crop of turnips. During the summer months I clean my hen house to have it nice and dry. I put the manure aside and save it for my turnips. There are a great many agricultural papers which speak of this manure. I consider this hen manure the best of all manures. In regard to fertilizers, I am under the impression it is rather expensive paying $30 to $40 a ton. As to the buying up of the ashes by the States, I think they need it more than we do, as their land requires it more than ours.

Mr. Beadle.—Have you an orchard?

Mr. Frame.—Yes; a very good one. I may say there is no money in the orchard. I think there is more money in other crops. The great difficulty is the frost does so much mischief to the orchards.

Mr. Beadle.—Do you fertilize your orchard?

Mr. Frame.—No; we use all we get for the fields.

Mr. Beadle.—Put 500 bushels of unleached ashes in your orchard.

Mr. Frame.—A farmer must not have too many irons in the fire. If he has, he cannot attend to them all.

Mr. Hay.—I find the best results in cultivation follow if you have the ground nice and mellow. I spread loose straw over it in the spring, and then I plough it up. I had a fine crop of potatoes. There is great difficulty with the ordinary manure in scattering it. Loose straw can be scattered nice and even. The result of my experience was satisfactory.

The President.—Did you try it the second season?

Mr. Hay.—We tried it twice.

Mr. Woods.—There is some value in growing fruit. Mr. Frame would lead one to

believe that we cannot grow fruit in this neighborhood, and that it does not pay. He gave as his reason why he thought it would not pay, that there would be too many irons in the fire. I think if he would pay even a little attention, his orchard would pay him.

Mr. TROW.—I think we pay too little attention to our orchards. I should fancy if we were more careful we would get more fruit. I shall have to pay more attention in future to my orchard. When I purchased my property I had a dozen different varieties of plums, but there is nothing left of them now.

Mr. MCKEOWN.—I want to get some information on picking and packing apples?

Mr. MACD. ALLAN.—The method we always follow, is to pick our apples by hand and lay them in heaps upon the ground. The varieties the shipper wants should be sorted out and divided into separate heaps; one heap being for the apples that are good, clean, and free from spots, etc. Then they go through the sweating process. After this we send a man to pick them over carefully and see none are bruised. Then they pick out the different sizes and high coloured apples, after which we proceed to pack by taking the choice apples, packing with the stems down. The barrel is then pressed down and securely nailed. When the barrel is opened at Liverpool, London or Glascow, they open the top of the barrel with stems all up, and they look nice. With regard to keeping apples; some prefer them upon shelves in a cellar. You should keep the temperature as near the freezing point as possible.

Leading citizens expressed their gratification they had felt in listening to the discussions, and votes of thanks of the customary nature were passed. The Association then adjourned to meet in Lindsay.

SUMMER MEETING.

The summer meeting of the Association was held in Lindsay and Bobcaygeon, on the 7th and 8th of June. The opening day at the former place was marked by a large attendance of prominent local fruit-growers and others from important sections of the Province. Mr. P. C. Dempsey presided, and, after routine, questions were asked and answered.

COAL ASHES.

QUESTION.—What are the fertilizing qualities of coal ashes?

Prof. PANTON said it was of very little use. A heavy, close soil might be opened by it, but it contained no plant food of any value.

Mr. MORTON (of Wingham) believed that barn-yard manure, if well taken care of, was better than any of the artificial fertilizers, but in the way much of it was kept, it was worth little more than straw.

Prof. PANTON had seen better results with barn-yard manure than any other kind.

Mr. JOHN CROIL (of Aultsville) said that the quality of commercial fertilizers varied just as much as barn-yard manure.

Mr. MCDONALD (of London).—A great deal depends on the quality of fertilizers as well as manure. Manure from well fed cattle would be worth from two to three dollars a ton, but a large percentage of the soil in this country would be benefited in the greatest degree if commercial fertilizers were mixed with barn-yard manure. Some soils, however, such as those in the vicinity of Guelph, are more benefited by potash, and ashes would therefore be the cheapest and most effective fertilizer. In the vicinity of London and most other parts of the Province, phospates could be most advantageously used in connection with barn-yard manure. The phosphate mines near Ottawa were the richest in the world, and if our farmers and fruit-growers were induced to use the product as extensively as they should, the price would be materially reduced and brought within the reach of all.

Mr DEMPSEY (of Trenton).—Wood ashes have always produced good results with me.

A SMALL GARDEN.

QUESTION.—How could I best lay out a half acre for fruit and vegetables?

Mr. W. W. WRIGHT (of Renfrew) suggested that everything be planted in rows, so as to permit of easy cultivation. Plant small fruits so that the snow would be likely to lodge and protect them.

Mr. GEO. COLVERT had noticed that if vegetables were planted within fifteen feet of trees they always suffered.

STRAWBERRIES.

A short discussion took place on strawberries and the time of planting. The spring was favoured as the best season for planting, and for varieties, high testimonies were given in favour of Crescent Seedling, Wilson, Capt. Jack, Manchester, Daniel Boone, Bidwell and Sharpless.

PEARS.

Mr. BEALL (of Lindsay).—I do not know that there are four varieties that would succeed in this neighbourhood. The Flemish Beauty and Clapp's Favourite are the only two we can hope to grow with any degree of success.

A MEMBER.—Have you tried Beurre d'Anjou?

Mr. BEALL.—Yes, but it will not live. The Flemish Beauty, however, does very well indeed. I have never had any trouble with it at all. I have one of Clapp's Favourite bearing this year for the first time, and the trees seem perfectly healthy.

Mr. WRIGHT.—Have you any of the Russian pears?

Mr. BEALL.—I have not.

Mr. A. M. SMITH (of St. Catharines).—Have you tried the Beurre Hardy?

Mr. BEALL.—Yes, I have also a Vicar of Wakefield tree. It has blossomed twice, but I have seen no fruit. When it does bear, however, perhaps it will do well.

Dr. CROSS (of St. Catharines).—I might say something about pears and how little I have made out of them. About twenty years ago I planted a great variety, and as fast as one tree died I planted another. Death was not caused by winter killing, but by blight. Most of my trees I planted over the second time, and some of them the third time, but for the last ten years I have planted principally the Duchess and they are now doing very well, and have had very little blight, but of all the varieties I started out with, I have only some eight or ten now. The Bartlett and Duchess are the only ones I make anything out of for the market. I treat a pear tree as I would a strawberry. I keep the ground well manured, allow no weeds to grow, and apply coal ashes to keep the ground loose. The Bartlett trees that I have, give me from a barrel to two and a half barrels per tree, which are worth five dollars a barrel. The Seckel is very hardy, but gives a good deal of trouble to thin, so as to keep few on, but they do not weigh much and it takes a great many to fill a basket. They make good pickles and keep pretty well. Of Clapp's Favourite I planted twelve trees about six years ago, and I believe I have one left, so that what little I make from my pear trees is off the Duchess and Bartlett. Still what I get from them satisfies me very well for the cultivation.

Dr. HENDERSON (of Lindsay).—Down a little south of this, they have the Bartlett, Flemish Beauty and the Beurre de Jersey; these do very well on clay soil.

Mr. GLENDINNING (of Manilla).—I only find two varieties that seem to stand the test—Clapp's Favourite and Flemish Beauty. I have tried the Seckel, but the trees grow a few years and then die of blight. I also tried the Duchess, but it blighted badly. It died the second year. When I came on my farm there were a number of pear trees just coming into bearing. I do not know what variety they were, but at all events every one died. Clapp's Favourite and Flemish Beauty seem to stand the test all right; in fact I have not known a Flemish Beauty in this neighbourhood to die. Clapp's Favourite has been planted extensively. These two kinds are the only ones which seem

to be generally cultivated in this immediate locality. Sometimes we see a fine collection of pears, but on inquiry it is found they were grown south of the ridges, which divides our county into two sections for fruit growing. I cannot, therefore, name four varieties for this section; but the two I have mentioned, will, I think, grow almost any place where it is well drained and the locality at all favourable.

Mr. JOHN COLVERT (of Lindsay).—My experience in the cultivation of pears is this: Some ten years ago, a man came around with samples preserved in a bottle. I took four trees and paid him five dollars. After that I got another tree, which proved to be the Flemish Beauty. It is flourishing well. Blight killed the others. This Flemish Beauty does very well, and last fall I took first prize with the pears off that tree.

Mr. MORRIS (of Fonthill).—I understand the question is, four varieties for this neighbourhood. I cannot understand why Clapp's Favourite should do well, and Beurre D'Anjou fail. It is the hardiest we have at Fonthill. Several varieties were mentioned that are hardy and ought to do well here. The Seckel should succeed. The list of very hardy trees, however, is limited. We have a kind that originated at Oshawa, which has proved very hardy there. There are some trees there sixty years of age, which have not been injured, and we are in hopes that it will fill the bill for a very hardy tree. We are cultivating some varieties of Russian pears and should be glad to place some in the hands of somebody here to test.

Mr. BEALL (of Lindsay).—Something may have been wrong with the Beurre D'Anjou, at all events, after trying some forty varieties, I have only the two left that I mentioned.

Mr. BEADLE (of St. Catharines).—I do not know any pears we have been growing for any length of time that are more hardy than Clapp's Favourite and Flemish Beauty. We are, however, experimenting with trees from Russia, but it is too soon to say whether they will grow with us, or whether when grown if the fruit will be satisfactory. They have some jaw-breaking names. It will take four or five years to settle the questions involved. The two varieties named here are the only two that seem to do in very cold latitudes.

Mr. FRANK WANZER (of Hamilton).—I have a rich pear which seems to do well in the neighborhood of Hamilton. It is called Beurre Clairgeau.

Mr. MORRIS (of Fonthill)—My experience is that it is very tender and the fruit inferior.

Mr. P. C. DEMPSEY (of Trenton).—I have had a great deal of experience in growing pears. Some trees, by cutting off the blighted portion will grow again; but the Beurre Clairgeau all died with me. It is one of the tenderest we have ever tried to grow. There is the Urbaniste; any one who has nerve and patience enough to cultivate a tree twelve or fourteen years before seeing any fruit, will find it a superior pear. I have never seen one inch of the tree blighted, and I have never noticed any effect from the frost. I only cultivated two trees, and the reason I do not cultivate more is because I have not patience to wait for the fruit. It is perfectly hardy. Most of the early varieties are hardier than the later, for the reason that the exertion in maturing the crop is sooner relieved, and the tree resists the severity of the winter better. I do not know any winter variety it would be safe to try here except Josephine de Malines. Doyenne Boussock is as hardy as Flemish Beauty, and I think I can produce ten pears of that variety as easily as I can one of the Flemish Beauty.

Mr. SMITH (of St. Catharines.—How is it for blight?

Mr. DEMPSEY.—I have it on clay loam and light sand, but none of them have blighted. I do not eat them, as they are not to my taste, but no pear commands as high a price as Doyenne Boussock when we ship them. I have several Persian pears; but unfortunately paper labels were used, which the mildew rendered illegible. I have several varieties; I cannot tell you what they are; but they came from Belgium and are apparently hardy, and produce a crop annually of good fruit. I have one which has made regular growth every year and it has got to be quite a tree, producing four or five bushels of pears annually. It is superior to Flemish Beauty. To you people here, I would say try more varieties. Do not be satisfied with three or four, but write to some of the nurserymen and tell them to send you ten or twenty of the most hardy varieties. Let them make the selection. Do not depend wholly on the agent's colored plate. Nurserymen will always send you good stock, if you send directly to them.

Mr. MORRIS (of Fonthill).—Mr. Pettit has handled one of the earliest varieties and a good pear too—the Beurre Giffard.

Mr. PETTIT (of Winona).—I have fruited this pear for the last fifteen years and it has never failed to give a very good crop, and there is no appearance of blight whatever. The pear ripens about the first of August, and coming into the market at that time, a sweet rich pear, commands a high price. I do not know how it would answer on pear stock; I grow mine on quince. It appears to be hardy in every way.

Mr. DEMPSEY.—I think it is called Giffard now.

Mr. F. WANZER (of Hamilton).—Has anything been said about Winter Doyenne and White Doyenne. They are excellent pears with me. For blight I have tried iron twinings or filings. I place them about two feet from the trunk, where they rest together and form an excellent protection from sudden changes of temperature. By this plan I have succeeded for the past two years in saving a tree from blight that was always so affected before. It is a Clapp's Favourite. One or two gardeners in Hamilton have tried the same experiment with good results.

The Association then adjourned for dinner.

There was a large attendance in the afternoon, and a quarter of an hour was spent in examining the specimens of fruit laid on the tables.

FRUIT PROGRESS.

Mr. J. L. PAYNE, of the Department of Agriculture at Ottawa, read a paper as follows:—

I propose, in a simple way, to give you such figures as I have been able to collect, relating to the foreign trade of Canada in fruit. I have to express a feeling of regret that the details of the trade are not available, but such as they are, they show very gratifying increases within the last fifteen years. Perhaps it would be better to preface the trade returns with a compilation of figures from the Census, showing how the cultivation and production of fruit has been developed within the past three decades. The figures are:—

PROVINCE.	YEAR.	GARDENS AND ORCHARDS.	FRUITS.		
			Bushels of Apples.	Pounds of Grapes.	Bushels of other Fruits.
		Acres.			
Ontario	1861	88,869			
Quebec	1861	33,417			
Nova Scotia	1861		186,484		4,335
Total		122,286	186,484		4,335
Ontario	1871	207,011	5,486,504	1,028,431	242,878
Quebec	1871	46,458	479,303	88,099	109,878
New Brunswick	1871	7,591	126,395	1,705	2,471
Nova Scotia	1871	13,614	342,513	8,167	12,736
Total		274,674	6,365,315	1,126,402	368,963
Ontario	1881	304,805	11,400,517	3,697,355	644,707
Quebec	1881	54,468	777,557	158,031	155,543
New Brunswick	1881	11,452	240,000	2,108	6,122
Nova Scotia	1881	21,624	948,317	35,913	18,485
P. E. Island	1881	2,785	31,366	795	2,247
Manitoba	1881	2,955	190	13	1,442
B. Columbia	1881	2,771	28,100	2,261	12,347
The Territories	1881	285	175	30	25
Total		401,235	13,377,655	3,896,508	841,219

Statistics, having special reference to Ontario, are only available in the reports of the Ontario Bureau of Industries, which show that while in 1882 there were 213,846 acres in garden and orchard, there were but 191,266 acres so used in 1885. This is clearly an error; but is explained to have arisen from the fact that the first estimate was merely approximated. It is not likely that a less acreage of fruit trees exists now than three years ago. The Census returns are, however, reliable.*

The following have been our foreign shipments of fruit since 1870:

Year.	Quantity.	Value.
	Barrels.	$
1870	20,810	58,811
1871	45,920	98,857
1872	106,568	264,015
1873	61,243	183,348
1874	51,084	128,915
1875	63,397	176,295
1876	84,107	170,005
1877	77,888	194,942
1878	53,213	149,333
1879	87,101	157,618
1880	146,548	347,166
1881	334,538	645,658
1882	212,526	540,464
1883	158,018	499,185
1884	51,019	173,048
1885	228,936	635,240

This class of fruit exported was almost wholly apples. It will be seen that considerable fluctuations have occurred, which were consequent upon a falling off in the

* The acreage of orchard and garden given in the reports of the Bureau of Industries is for township municipalities only, and since 1882 it has been taken by the township assessors. Referring to the discrepancy between the census and the assessment returns the report of the Bureau for 1884 says: "The reduced area of orchard and garden is no doubt owing to the difficulty of obtaining uniform acreages from farmers in successive years, and this difficulty is increased where the aggregate is made up of a large number of parts. There are not many farmers who know the exact area of land they have in orchard and garden, and a difference of one-half or even one quarter of an acre more or less in one year than another may make a decided change in the whole quantity. It very rarely occurs, indeed, that in the oldest and best settled townships the area of assessed land is the same one year after another, as recorded on the assessment rolls." As for the reliableness of the census returns, it is a question of degree. The census enumerator gathers the returns once every ten years, and the assessor once every year.

supply. On the whole, however, we buy more fruit than we sell, and some of it of the classes grown in Canada. This will be seen from the statistics for 1886, of imports :—

Kind.	Quantity.	Value.
		$
Apples, dried	556,551 lbs.	34,683
Currants, dried	5,019,862 lbs.	174,487
Dates, dried	849,807 lbs.	24,374
Figs, dried	1,089,146 lbs.	51,703
Prunes and plums, dried	1,755,862 lbs.	65,050
Raisins, dried	7,762,830 lbs.	353,124
All other, dried		12,687
Apples, green	27,507 bbls.	61,919
Berries, green	220,398 qts.	27,624
Cherries and currants, green	49,685 qts.	4,492
Cranberries, plums and quinces, green	7,611 bush.	26,301
Grapes, green	587,515 lbs.	46,159
Peaches, green	19,239 bush.	59,482
Oranges and lemons, green		334,492
All other, green		90,068
In cans	735,086 lbs.	42,075
Total value		1,408,620

If you ask who are our customers, the answer is, that of the 238,936 barrels of apples shipped out of the Dominion in 1885, Great Britain took 207,659; the United States, 25,320; Newfoundland, 4,915; St. Pierre, 569; Germany, 6; B. W. Indies, 243; S. W. Indies, 39; D. W. Indies, 5, and British Guiana, 180. Of the $32,980 worth of "other fruit" exported, the United States took $27,666 worth.

The three greatest fruit exporting countries are Spain, Italy and Greece. In 1880, Spain headed the list with 121,200 tons, valued at $8,400,000.

It may also be of interest to you to know that each inhabitant of Great Britain and France, is estimated to consume ten pounds of fruit in the course of a year.

QUESTIONS.

Question.—How and when to propagate Hydrangea Paniculata?

Mr. Beadle.—It propagates very readily from layers. The time would be when the wood is sufficiently ripe not to damp off, or take the young wood of this year, and lay it down as soon as it would bear laying down.

REMEDY AGAINST ANTS.

Question.—How can we best destroy ants and not injure the plants, grass, etc.?

Mr. Beadle.—What harm do the ants do?

Mr. Croil.—They throw up the earth on the lawn.

Mr. Beadle.—I have never been very much troubled with them, although my soil is what they like to work in, sandy. I find phosphate of lime, with a little slacked lime or ashes, seems to keep them in check, although I have no experience in destroying them. They work in the paths, but not in the lawn.

A Member.—A plan I have heard of, is to saturate a sponge with sugar and water, into which the ants will go, and then dip it in hot water.

Mr. Morton (of Wingham).—I have effectively banished them by making holes in the ant hills or around them and pouring coal oil therein. It causes them to leave for fresh pastures.

Mr. Beadle.—Does the coal oil injure the grass?

Mr. Morton.—Yes: if you scatter it over the top; but if you dig a hole three inches deep it will not affect the grass. I have poured probably a teacupful on the surface near trees and it has not injured the tree.

Mr. Wilgress (of Cobourg).—I tried the sponge and it did not answer, I tried coal oil and it killed the grass I have also tried ashes and hot water, but cannot get rid of them. The only way is to dig them out. They are a perfect nuisance.

Mr. Head (of Lindsay).—If you will make an emulsion with sour milk or skim milk and coal oil, and add water, my experience is that you may syringe even delicate plants with it, without fear of injury. I am sure this would drive ants from the places mentioned.

ANOTHER PEST.

Question.—"What is the best remedy for the black insects that infest Chrysanthemums"?

Mr. Beadle.—I cannot answer that question until I know whether black lice is referred to.

Mr. Morton.—I think it is one of the plant lice.

Mr. Beadle.—One remedy is tobacco smoke, so long as you can confine the smoke. I know of nothing better.

Mr. Morton (of Wingham)—There is a most excellent remedy for nearly all insects, called Dalmatian, or Persian Insect Powder. The California powder, called Buhach, answers best. If you can get it fresh it gives very good results, but as a rule you cannot tell how long it has been in the shops. It must be kept in glass stopper vessels, or the volatile principle evaporates and the powder loses its destroying power. The best way I have found of using pyrethrum is to put it in alcohol or hot water and syringe the plants with it. I think a great deal is wasted if applied dry. It is certainly an excellent thing for destroying all forms of insect life. I would not be sure of the proportion I used, but I think it is one ounce of pyrethrum to two gallons of water. I think I have sometimes used a stronger mixture than that. It is not expensive, and if a plant is badly affected with lice you may give it an extra dose. If I depart from the formula, it is to make it a little stronger; but I think an ounce to two gallons would be about right.

Mr. Dempsey.—We sometimes treat insects to a little poison mixed with a sweet principle. Arsenic is what we use.

A DIFFERENCE BETWEEN CURRANTS.

Question.—"Please explain the difference between Moore's Ruby and Fay's Prolific Currant. Where can Moore's Ruby be got, and at what price?

Mr. Morris (of Fonthill).—Moore's Ruby is not quite as large as Fay's, but has much longer bunches and is probably three or four times as productive. They are as productive as any currant grown; but their great merit is in the flavour, which is very mild. They are not generally sold yet, but are worth about $1.10 in a retail way. We have had them side by side receiving the same treatment.

SHORT STEMS FOR TREES.

Question.—"Which is the more advisable, long or short stems for fruit trees; and what height of stem is recommended?"

Mr. Pettit (of Winona).—The question was discussed some years ago in the Grimsby Fruit Growers' Association, and Mr. Morris took a stand in favour of low

heading. Since that time I have been watching it pretty closely and I am inclined to think that Mr. Morris is right; that a tree with more head and less trunk grows better and will withstand the blight better, and not be as likely to become sun burned or have the bark injured as one with a long trunk. In peach trees, with a low head, you can cultivate twice as close as when you attempt to run them up. In picking there is also an advantage, and for all the reasons I should certainly favour low heading.

ROSES.

Mrs. Beall, of Lindsay, presented several plates of roses in bloom, and at the request of the Association she described them as follows:—"That is the Baltimore Belle; it is a climbing rose and grows in clusters; it does not winter-kill with ordinary treatment, although we find it necessary to lay it down; it must be trained up again in the spring in order to get a good supply of bloom. This rose is the Madame Alboni, which we have to cover, as well as almost all our roses, to protect them in winter. We cover them with a little pea straw or grass and then throw brush over it to keep it from blowing away. Anything we lay down, however, we generally put a stick of firewood on top. It is to my mind sure death to a plant to place a board over it."

Mr. Beadle.—It must not be covered so tightly as to smother it. A friend of mine wanted to take particular care of a rose bush and covered it over with a barrel and covered the barrel over with manure. He succeeded, as you might suppose, in keeping the frost out, but it never showed a sign of life afterward.

Mrs. Beall.—This Madame Alboni is a free bloomer, and is one of the most enjoyable of all roses on account of its abundant perfume. Some of our roses, although beautiful to look at, lack this quality; but this particular variety is to be cultivated for that quality as well as its fine appearance.

Mr. Beadle.—Here is one of the Provence roses, which blooms only once in summer; it is not remontant; it is something like the old Cabbage rose, although not the same as I have been in the habit of growing; it is not so full, and is a little deeper shade of colour. The Cabbage rose, I still think, is one of the finest grown. This one was given to Mrs. Beall as a Cabbage rose. Here are two roses very much alike. One is La Reine and the other is the Duke of Edinboro.' They are remontant, and are of a rich colour. They look as though they might have been grown on one bush, but they have not. This is another old variety, Caroline D'Canso, very much cultivated and admired. Here is a white summer rose, the best white rose we have, and the most profuse bloomer—Madame Plantier; it is almost free from thorns; it does not bloom again in the autumn. We talk about remontant roses being perpetual. We call them hybrid perpetuals. I am reminded by this of a boy going through the cars crying out "Hot mince pies," somebody bought one and found it cold, having been frozen. He said, "I thought you called those hot mince pies." "Yes," answered the boy, "that's the name of them." These roses, however, although called perpetuals, will actually bloom until the snow comes. It is one of the most perpetual of the perpetuals. Here is one other free bloomer, Jules Margottin, in which you see is another shade of colour. As to insect remedies for roses, I have exhausted my knowledge in the August number of the *Horticulturist*, and presume most of you have read it there.

Mr. Morris (of Fonthill).—With respect to cultivation, make the soil as strong and rich as possible, and keep it thoroughly cultivated during the season. They will not do well in the grass or lawn, where they are sometimes planted. As the subject on the programme was to name twelve of the best varieties, I have written down that number:—General Jacqueminot, La Reine, Louis Van Houtte, Prince Camille de Rohan, Coquette des Alps, Victor Verdier, Madame Plantier, Sabot, Perpetual White, Crested Moss, Queen of the Prairie and Gem of the Prairie.

Mr. A. A. Wright (of Renfrew, Ont).—Out of my forty varieties these are the ones I have selected. I have divided them up, first as to coloured roses. First of all I put Alfred Colomb. The reason is because, it is very striking in colour and is the

hardiest rose we have, which in our section of the country is of paramount importance. It is a very free bloomer and is a fine scented rose. The next is General Jacqueminot, a fine grower, hardy, and one of the proudest roses we have; so red and bright. The next is Baron de Bonstetten; then Louis Van Houtte, and last of all, Anne de Diesbach. Among pink roses, I do not think any one will dispute the right to place at the head of the list La France, in odour, colour, and everything except hardiness. It is the finest rose we grow at all. Next I place La Reine, and then for size, as it is the largest of any rose I have, and perhaps the largest grown, unless it be the new American Beauty, is Paul Neyron. In whites there is the Madam Plantier, and in yellow, Harrison's Yellow. Among moss roses is the Park Moss. The Polyantha, which is small, is an enormous bloomer and bears in clusters. The best among these is the Mignonette. With respect to treatment, I protect all my roses, and to do this I first build a sort of fence about them, two and a half or three feet high, by driving down sticks. The object is to get the snow to lie on top of the roses. I peg the bushes down with sticks and then bring forest leaves by the wagon load, which, being light, prevents the rotting of the stems in the spring. I put over all a coating of pea straw, which does not blow away with the wind. If you have any trouble in that way throw boughs over them. A lady in Ottawa has an improvement over this in the use of dry cow manure, which she puts under the rose before covering, and she says it prevents rotting in the spring. I cut back my roses considerably before pegging down, and after uncovering in the spring I cut them back again. With reference to manure, you should have the ground as rich as you can get it. I take a little garden trowel in the spring, scrape the earth away, and then go to my henery and put as much of manure around the plant as I think will not injure it. This I cover over with earth, and after the first rain the plants will grow as rapidly as you ever saw anything. You cannot have the ground too rich. Then, with reference to insects, I cannot give you anything so complete as has just appeared in the *Horticulturist*.

Mr. HARRIS.—I left off the Washington and Alfred Colomb because they are slow growers. Budded roses in the hands of those not used to them are valueless, and I do not recommend them for general use. La France is one of the choicest roses; but I do not think Mr. Wright can carry it over the second year. It is too tender for general cultivation.

Mr. DEMPSEY (of Trenton).—I have had it for twelve years in one spot. If I had to throw aside every other rose I cultivate, La France would be the last to go.

APPLES.

QUESTION.—What have been the failures in this neighborhood?

Mr. BEALL (of Lindsay).—There have been many failures in this neighbourhood, but our people are too modest to let the outside world know about it. There are some places, however, where they do very well. Within a few miles of this place, I believe we have some of the best fruit land in Canada. I know you will not agree with me; but that is my opinion, nevertheless. With the exception of peaches, we have a climate well adapted for all the principal classes of fruit, including apples and grapes. We can grow better grapes than anywhere along the north shore of Lake Ontario. The best samples I have seen exhibited anywhere away from the Provincial Exhibition, have been at Orillia, away north of this. In speaking of failures, I think we may attribute them to two main causes. First, to undrained land. That is the greatest cause we have. We have now a great quantity of under-draining going on, but it is not the kind which will do most good. Our drains are usually two and a-half feet deep, in heavy clay soil. That, I say, is not sufficient for an apple orchard, because a large proportion of the roots on an apple tree above fifteen years of age, are lower than two and a-half feet. I have found thousands of roots down three and a half feet, and rotten at that. The next cause is every person being determined to grow tender varieties. In setting out an orchard of a few hundred trees, so many people want atleast fifty varieties. Now, I do not think I can name twelve arieties that I believe to be suitable for this soil. If a farmer has a field to sow

with wheat, he does not ask his neighbors how many varieties he should put in; he knows it would be folly to put in many. It is as great folly to make his ground a place for testing apples. I do not think you can find more than eight or ten varieties suitable for this neighborhood. The question is asked:—"Should orchards be cultivated after commencing to bear fruit?" No. There should be no ploughing or planting of other crops; but if some light cultivation were done, it might be of some advantage. In taking away a crop we rob the soil of a certain amount of nutriment which the trees should get. I think there is not nearly enough manure applied to our orchards, and perhaps Mr. Panton might show us what kind of manure would be best suited for such a purpose.

Mr. J. Croil.—Would you have the orchard seeded down?

Mr. Beall.—All crops take nourishment from the soil; but if you have grass, cut it and leave it there.

A Member.—What about pasturing?

Mr. Beall.—For pasturing, I would prefer sheep. There are certain breeds of sheep that will not bark the trees, while others will. The next question is with relation to the most desirable aspect for an orchard. If I could have everything as I would like, I should like a north-western proclivity. Let the land lie pretty much up towards the north-west, but not to the south-east. The cold would be about the same on either side, but if the snow lies on the ground it will protect the roots of the trees. "Are wind breaks necessary?" I think they are, but the question turns on what wind breaks really are. I do not think a high, close board fence is a wind break. I do not think matted rows of pine or spruce are wind-breaks. It is in one sense, but it is not what we require, or what is necessary. I think it keeps off too much of the wind. I would prefer three, or four rows of deciduous trees, which would allow the wind to pass through, but would at the same time break its force. Three or four rows on the north and west sides will screen the orchard as it needs to be. As to the varieties which may be profitably grown in this section, I might name the Red Astrachan. I do not think, however, there is a very great deal of profit. It is the earliest we have, and is the earliest we can grow profitably. The next apple, that is next in order of ripening, but which should really be placed at the head of the list with respect to profit, is the Duchess of Oldenburg. As much can be got out of that tree here as in any part of the world. They will bear every year. The next is the St. Lawrence. This does well and is profitable to grow, because it is fine in appearance and will bring a good price.

Mr. Croil.—Does it spot?

Mr. Beall.—No; never to any extent. We have never had any apple to spot here but the Fameuse, and that not badly. The next apple is Keswick Codlin, and then Colvert. I do not grow it myself, but I had excellent samples brought in from all directions. The next is the Snow apple. That does well here. Then there is the Haas. The next is the Wealthy. I am satisfied it is a most excellent apple, and after further testing, I shall expect to find the Snow apple given up and the Wealthy put in its place. I have given you eight varieties, but there is one more which I have down and of which I have heard a good deal—the Yellow Transparent. I have no winter apple down, because I do not think any winter apple can be profitably grown here. None of the russet family would be considered profitable here, although I have recommended so many of my friends to get the Golden Russet.

Mr. Dempsey.—Will not the Tolman Sweet grow here?

Mr. Beall.—Yes; but there is no profit in it.

Joseph Wilkinson (of Cambridge).—I have had some failures. I came here some thirty years ago. I planted fifty apple trees when I came, and there is only one of them left now, and that is the Vandevere. These trees grew beautifully for some years and then when they began to bear, they died branch by branch, until only the one I have mentioned is there now. I read about a Scotchman who dug a hole, filled in a lot of stones, put in a tree and filled it around with earth. I tried that, but only one St. Lawrence tree is left. Those trees did not die of wet feet. Those I planted on a heap of stones would grow immensely, two or three feet in a year, for several years. I thought perhaps the soil was too rich and they grew tender. Two of the trees I planted on stones were [illegible] es, and they are still healthy. The St. Lawrence is not healthy,

although there yet, and in a few more years will be dead. The next thing I tried was to plough up the soil and make it into ridges, in which I planted rows of trees. These grew for some years, and now there is about a third of them left, although they are dying branch by branch. The most healthy tree there now is the Duchess of Oldenburg. They are beautiful apples and bear abundantly every year, but the fruit will not keep.

Mr. BEALL.—What kinds are those which fail?

Mr. WILKINSON.—The Russet was one. I planted a whole row of seedlings after trying the alternate plan, ten or eleven feet apart. They have neither had cultivation nor pruning, and they are healthy. My idea is they are there because nothing was done, and the nearer we come to the condition of the forest, the better chance the trees will have. The cultivation of the ground around the trees and the pruning lets in the sun and breakes the earth; whereas, if we had a mulch on the ground, it would keep out the sun and prevent injury by frost in winter. Most of you are acquainted with the trees at Sturgeon Point. There was a beautiful orchard there before the hotel was built, but now the trees are dying one after another, because, I think, the conditions of the forest are taken away.

Mr. CROIL.—Did you prune any of your trees?

Mr. WILKINSON.—Yes; I think I pruned the first lot in winter.

Mr. DEMPSEY.—You cultivated the soil with the first lot and made the ground very rich?

Mr. WILKINSON.—Yes; but the last lot I did not either cultivate or manure.

Dr. HERRIMAN.—Did you have a wind-break around the first lot?

Mr. WILKINSON.—No. With respect to varieties, I may say that the Duchess of Oldenburg is the best I have found.

Mr. GLENDINNING (of Manilla).—We have near here as good a section for fruit growing as can be found in the northern part of this Province. We can grow many varieties; more, indeed, than I could name. I will name a few of them that we find profitable. I would take two summer apples, the Red Astrachan and Duchess, both hardy and good bearers. For two fall apples I should put St. Lawrence and Fameuse. It is given as a winter apple by some, but it is not. If I were going to add two more to the list of fall apples, I would add Colvert and Keswick Codlin. The Golden Russet is the best winter apple we have; it is a sure grower, and we very seldom see a branch killed. I have seen some that took a sort of a blight in the summer time and died back, but it is not common. I have never seen a large tree affected that way. The next one is the Wagner. It is a short lived tree, but as it comes into bearing very young, if it only lives fourteen or fifteen years, it has paid for its cultivation. The apple is a good one. There has been a good deal said about the Tolman Sweet, but we find it profitable. They like it for baking purposes. It is a sure grower and a good bearer. Among the new varieties I would name the Wealthy as a very good apple and quite equal to all that is claimed for it. There is nothing, however, which shows greater promise of hardiness than the Pewaukee, the only fault of which is a tendency to allow the fruit to be blown off when it is pretty well grown. Then last, but not least, I would put the Ben Davis; it is hardy, a good bearer and of good quality. As this question relates largely to the market, we find that those which have a fine appearance bring better prices than those of good quality. I have given you ten or twelve varieties, which I think is sufficient.

With regard to those varieties that are not doing well, the King is suffering badly; they did very well until the spring of 1885, when the effects of the winter began to be seen, and the bark of a great many trees turned black, and scaled off in places. The Northern Spy did not appear to be affected until this year, when we found them dying. It was the winter of 1885 that did the damage; the bark is bursting off, and one-half of the tree seems to die after leafing out and blossoming. The Baldwin has been extensively planted, but very few of them are living. They were bought because of the high praises bestowed on them as a market apple, and while they may do in other sections of the country, they do not answer in this.

I have pruned generally in June. I am of the opinion that orchards would be better seeded down; I have top dressed mine every second year with manure, and find that the

trees do well. I seeded down with red clover and June grass. If you mow it, it comes up the second time and leaves soft places, on which the apples fall. If you plant timothy, and mow it, when the apples fall the stubble runs through them. There is nothing of that kind with the clover and grass, which, to my idea, answers better than anything else I have seen. As to the aspect, I know what I am going to say will not meet with the approval of many prominent fruit growers. My orchard lies over a high ridge, part of it facing the south-east, and part of it north-west. I give my preference to the south-east. I know that it has been said and argued, that a north-west aspect has a tendency to keep trees from blooming early in the spring. Well, that depends on circumstances; I have had the same kind of a tree in bloom on a north western aspect before one on a south-eastern aspect. We do not, however, look upon early blooming as a detriment. I do not know whether it is the locality, but during the thirteen years I have been on my farm, I have not seen a single blossom destroyed by spring frosts. My reason for preferring this eastern aspect, is this: when we come to the fall of the year, we suffer from high winds, and a great many apples are blown off; if the trees catch the north-west wind at that season of the year, we lose in the fall, but never in the spring, and by being shielded from these fierce winds, we generally have a fair crop. I have noticed also, that winds in the spring of the year affect the blossoms and prevent them from setting. It is not necessary that we should have frosty winds to do damage, for I have seen dry, hot winds as destructive as cold ones. There are some varieties which seem more susceptible to the action of the wind than others. The Ribston Pippin has been mentioned to me, but as a general thing, the Keswick Codlin suffers most; if there happens to be any high winds during the blossoming, we get comparatively few apples. In regard to wind-breaks, I believe them to be very necessary.

Dr. Herriman.—Have you a wind-break on the north-west?

Mr. Glendinning.—Not all along the north-west; but I have on a part. I have noticed that a great many more apples are shaken off where there is no wind break.

Mr. Morris (of Fonthill).—We have, so far, heard two causes of failure in this northern soil—bad planting and tender varieties. I would like to add another, viz., late cultivation. Cultivating late in the season tends to make the trees tender for the winter. The work should be done early. I do not think you can get too much growth early in the season, but stop cultivating as early as this—the middle of summer. Another cause of failure was that spoken of by Mr. Pettit, and that was trees in cold sections having too long stems. These are exposed to the sun and are killed on the south-west side. If you notice, young trees will suffer that way. Then, if you have a wide, large top, the wind cannot sway it over. I used to make this matter of low stems a hobby, but at the Grimsby meeting I got such a set-back that I feel it gratifying to know that I made one convert, at least. Nurserymen generally think the right time to prune is just when the winter is over. June is, I think, the worst month in the year, unless you can do it without getting into the tree. The bark of the tree is loose, and if you step on it, or take hold of it, it is liable to peel or remain loose. There is a danger of doing a great deal of damage in that way. Prune, say, in April. I would recommend you to cultivate trees from the time they are planted until you are done with them, bearing in mind, however, to confine yourself to the early part of the season. I have noticed that one way of cultivating orchards, is to sow buckwheat. The plowing and harrowing come just at the right time. Cultivate as often as you like, early in the season. As far as wind-breaks are concerned, I would recommend the plan suggested by Mr. Beall, not to shut out the wind, but break its force. Where the wind cannot get through, I have noticed that the trees are more subject to the codling moth, and other insects of that kind. The list of apples I would recommend are as follows, of all well tried sorts:—The Wealthy, Duchess of Oldenburg—I have left out the Red Astrachan, as it is not so hardy as the Duchess of Oldenburg and the apples come in at very nearly the same season—and the Yellow Transparent. I think this latter is going to be a very good apple for cold sections, and the Duchess of Oldenburg will follow right after. Then I would name the Wallbridge, American Golden Russet, Tolman Sweet, Alexander, St. Lawrence, and Canada Baldwin, which was originated in Lower Canada or Quebec, and is very popular in that

section. For a very late keeping apple, I would recommend the Mann. The list might be extended, and, if so, I would include the Ben Davis and Colvert.

Mr. ROBINSON (of Lindsay).—I take the following:—The Red Astrachan, which is fine and hardy here. The Duchess of Oldenburg everyone can grow. The Tetofsky, a Russian apple, is hardy and a good bearer. The St. Lawrence I find very hardy. I would like to mention the Canada Red and Alexander. Keswick Codlin I had bearing for some time, but they are dying. The Canada Baldwin I am growing now, and think it will be hardy. The Wagner I do not think is very hardy here.

Mr. BEADLE.—Have you tried the McIntosh Red?

Mr. ROBINSON.—I have had it a few years, but some of my trees have been killed by over-pruning.

Mr. BEALL.—Do you think the Ben Davis will grow here?

Mr. ROBINSON.—No; I had a number of them, but they are all dying, or are dead.

Mr. G. SMITH (of Lindsay).—I have had the Keswick Codlin growing for ten years, and it has fruited every alternate year, nearly, since I planted it. It seems to be perfectly hardy here. I live forty miles to the west.

Mr. GLENDINNING.—Mr. Morris mentioned the Walbridge. It has been generally considered a hardy variety, but it is not so in our section. I had only one tree, and it died. It seemed to suffer around the base of the limbs first. I was talking to a a man who sold a good many trees of that variety during the last three or four years, and he said the general verdict was, they were not hardy. I am sorry for that, as I thought it was going to be a good variety.

Dr. HERRIMAN (of Lindsay).—I have seen many fine orchards planted on a northern exposure, well drained, and protected both by hedges and wind-breaks, to which the proprietors attribute much of their success; and what I have heard to-day confirms the idea that one cause of failure is want of wind-breaks. Many trees that I have seen have been planted for over twenty years, and are still bearing well. I might name the Wagner, Alexander, Snow, Tolman Sweet, Golden Russet, Northern Spy. There is also a fine apple called the Yellow Bellflower, which is doing well. To show you how different is the result, with different people, one man got seven trees and they are all living; another man planted seven and they are all dead. There was no wind-break in the latter case, and the soil was a little too shallow. I have noticed that a number of orchards, lying in low, wet soil, without drainage, have died. This section of country has a ridge of nice warm clay loam, and all the orchards I have seen doing well, are those placed on nice, well-drained soil. The two orchards I spoke of, as being successful, have a northern aspect, and are drained into Sturgeon Lake. It is not a thick wind-break, but I have noticed that there is also a fine, heavy bit of woods to the north.

Mr. J. L. PAYNE (of Ottawa).—The Spitzenburg apple is a favourite at Ottawa. Will the tree grow here?

Mr. BEADLE.—No.

Mr. COATES (of Cambray).—My orchard is on a sandy loam, sloping to the south, and on the west I have a wind-break, not quite finished, composed of cedars and spruce. My trees have done better than those in an open space, but the tree that has not succeeded with me has been the Baldwin. The Red Astrachan appears to be a tree that does well on my place, although half of my Bellflowers have died. The Duchess of Oldenburg bears every year, and the tree is hardy. The Snow apple also succeeds, and so does the Tolman Sweet. I have the Roxbury and Golden Russet, and the Ben Davis doing well, and I have one tree of the Ontario which is doing even better than the Ben Davis. The Ben Davis was slightly injured last year by the frost, but not much. The Ontario bears a fine crop every year, and is a very fair apple. I think orchards should not be cultivated after they commence to bear fruit. I give them a top dressing, every other year, of rotted manure, from which I can see an advantage. As to the time of pruning, I find the trees do better if the operation is performed early than if delayed. The time I select is just as the bud breaks.

Mr. DEMPSEY (of Trenton).—There is something for all to learn if we take a proper view of this discussion. You will find that most of the failures have taken place in gardens where the land is manured highly and where it is a strong, heavy clay loam.

Evidently cultivation has been carried on from spring to fall as long as the frost was out of the ground, preparing the soil for a crop of vegetables, or something else, to follow in the spring. Where we find in the country parties growing orchards on a more favourable site, they are succeeding in producing almost every variety of apples, and failures are exceedingly rare. Now, I think this idea is worthy of our attention. We learn this from the discussion of to-day, if we only give it a thought.

With respect to soil, my mind has not been changed by what I have heard. If you read the reports you will see that I have said I would rather have a drifting sand than heavy tenacious clay for growing apples. I have seen the Baldwin apple flourishing in a section of the county where the climate is as severe as in the town of Lindsay, on soil where a pine stump had actually drifted out. The Baldwin tree had been planted just a short distance from where this stump was standing, and the finest Baldwin apples I ever looked at were grown on that land. Grass will not grow there; but the apple was flourishing and giving perfect satisfaction.

You talk of cultivation: I know a very large orchard of some two thousand trees where the man was persuaded it was unnecessary to cultivate and still he wanted to raise a few acres of beans, and on the portion where he grew the beans the apples were fully double the size of those on the portion he left to grass, although top dressed liberally and the grass not taken off. He was taking a crop of beans off and using no fertilizer. Just that one observation was sufficient to satisfy me that we should cultivate our orchards early in the season. Again I visited an orchard where the man was practicing cultivation by sowing red clover whenever the ground became a little lean and mixed in red timothy. The next year he would have a stand of clover you would think was a year or so old and he would then plow it under. He was manuring his orchard in this way and making a success of it. There are various ways of making a success of an orchard, but we must come down to ask where do we find them flourishing? It is on a northern exposure in preference to a southern. The best wind break I have seen was a natural one. If we want to make a success of fruit culture we must select a favourable site. Do not be afraid of getting the soil to light. Speaking of drainage: where my house is, and where I commenced to plant, it was a bog soil, some of heavy clay and some of lightish loam. In preparing it, I underdrained five feet deep. I supposed that was sufficient. It cost me more than the land, and more than the land would bring if it were offered for sale to-day with the orchard on it. I cannot grow the Baldwin nor the Greening on it, but strange to tell you, I can grow the Roxbury Russet on it, an apple tenderer than any of them. The Yellow Bellflower is hardy on it. There are a few varieties that succeed on it. The Tolman Sweet is doing very well and the Ribston Pippin is succeeding well. I think it is next to impossible to underdrain land that is unsuitable for orchard purposes and make a success of it. The roots have gone down below five feet.

With respect to varieties there are a few that I have not heard spoken of that might do well here. One is the Hawthornden New. It originated in Scotland, is perfectly hardy in the northern part of that country, and to say that it is productive does not convey the proper idea. It will produce such an amount of fruit that the trees cannot bear it, and next year you will find a crop there again. I have not known an inch of it to be frozen. There are several varieties worthy of trial, if nurserymen would propagate them. The Cellini is a very large fine apple, far superior to the Colvert. It will produce two bushels to one of Colvert with me. Our object is to cultivate winter apples.

I think most of your failures here have been from the causes you have mentioned. Pruning has something to do with it. I had an uncle who had the idea that his orchard was too thick, so he sent his man into the orchard with an axe, thinking that by severe pruning he could double the size of his apples. He lost all his trees. It must have been planted with hardy varieties for many of those trees were from sixty to seventy years old, grown from seed. The axe did it.

Mr. MacDonald (of London).—With respect to soil, we know that trees are great feeders on potash, and on sandy soil a liberal quantity of ashes should be used.

Dr. Herriman (of Lindsay).—With respect to the packing of trees and sending them to customers, my experience in one case was not very satisfactory. I ordered fruit trees

to be sent to Manitoulin Island, but when they got there the roots were dry and they soon died. I ordered some more and when they came I was delighted. They were beautifully packed in a box with nice chaff straw thrown about the roots, and on opening the box the bark was found to be green and new, roots had begun to grow. Every one of those trees are growing and doing well. I am quite convinced that a great deal of harm is done through defective packing. The small fibrous roots should never get dry before being put into the ground. Mr. Dempsey made an observation that the soil could scarcely be too light. My experience is that trees have not flourished on light land.

Mr. DEMPSEY.—There is no doubt that you can make a perfect success by growing apples on a sandy soil. It must, however, be cultivated and manured.

Mr. MORRIS.—You do not get the quality of fruit. To get that you want heavier soil.

Mr. DEMPSEY.—That is true, but how easy it is to apply lime to sandy soil. There is more potash contained in clay soil, but how easy it is to apply potash. We want to get rid of these ash buyers. We don't need them any more. Let us scatter the ashes over our apple orchards. We can give the trees the feed they require on sandy soil.

Mr. DOUGLAS (of Manilla).—One thing has been lost sight of in this section, and that is proper cultivation. It may be that cultivation late in the season has done much harm. Some of the older orchards with us are those having a northern aspect, and have been kept in grass a large portion of the time. The trees there are fifty years of age, and of those that have been planted half that time, not so many are alive as the older ones.

Mr. MORRIS (of Fonthill).—I do not think grain should ever be sown among trees, except it be buckwheat. I remember planting a lot of trees myself. Half were planted in wheat and the other half in corn. That half planted in the wheat was nearly full of borers. They attack a tree that is unhealthy. The soil was clay loam. Nothing tends to set trees back more than by drying up the ground.

Mr. MACDONALD.—What is your experience about guiding the roots.

Mr. MORRIS.—They will take their own course.

Mr. MACDONALD.—Has the soil any influence?

Mr. MORRIS.—Yes; if it is hard they will spread instead of going down.

Mr. BEADLE.—I will corroborate what Mr. Morris has said. A neighbor who had a fine apple orchard asked me to go and see it. He had a beautiful field of rye in his orchard, and nearly every young tree was turning yellow in the leaves. I said your trees are dying for want of water, and they did die.

Mr. DEMPSEY.—Just as quick as the grain begins to brighten, the rays of the sun are reflected on the under side of the leaf and the tree is injured. You may see the same effect by turning a grape leaf over and exposing it. It will be killed in nearly twenty minutes. You can do the same with an apple tree. Just as soon as the grain begins to change its color, so that the rays of the sun are reflected on the under side of the leaf, it has the same effect as a mirror. You may experiment with a mirror if you like. Mulching is really a system of cultivation. It opens the soil so as to receive a certain amount of the atmosphere; but when you commence to mulch you must continue. If you do not, after a while all the roots will be found on the surface. If you go to the forest and rake away the leaves, as I have done in search of plants, you will find that the roots are running right under the surface.

Mr. A. A. WRIGHT (of Renfrew).—There is nothing to keep clay soil so light and pliable as mulching: but you must continue it forever, or those roots coming to the surface will die. If you can continue it, it is certainly a fine way to work clay soil.

Now I want to say one word about the Yellow Transparent apple. In the north it is one of the earliest and hardiest apples we have. There is no other apple that will ripen so early: it is a fine size, smooth, of good flavor and one of the earliest. The Tetofsky has been mentioned, but it is really nothing like so good as the Yellow Transparent, and has a habit of dropping its fruit, which is not true of the Yellow Transparent. The tree, too, is fine and shapely. The Wealthy stands at the head of the list in our section of the country, and ought to be planted in every section where there is a difficulty in getting hardy trees. The Wallbridge and the Pewaukee are not hardy enough. Some can grow it in favoured localities, but as a rule it will not succeed. The Peach of Montreal

is very fine. You cannot ship the fruit any distance, as it is very easily bruised and looks bad; but if you can pick it and take the fruit to market in baskets, there is none other that sells so well, and the tree is as hardy as any you can find. The only objection you can have to it, is that it is a fall apple and will not keep. The Alexander is perfectly hardy in our section, large in size, and for selling we have none that does better. The Duchess of Oldenburg is hardy, but not so much so as the Wealthy. In many catalogues you will find that the Duchess of Oldenburg has been placed at the head of the list; but it cannot compete in our section with the Wealthy. I have come to the conclusion that there is no other apple tree hardier than the Wealthy. The Duchess of Oldenburg is a magnificent apple and as grown in northern sections is superior to those grown in southern counties.

Mr. BEADLE.—Have you grown Scott's Winter?

Mr. WRIGHT.—I have, and a fine apple it was. I allowed the birds, however, to get into the tree and spoil it for a market apple. I have had the Canada Baldwin, and so have many of my neighbors; but we have only one tree there living. I have no faith in its living to any size. Might I just say a word with reference to the people in this section. They have been troubled with a good many conflicting stories regarding the hardiness of the Russian apples; but as far as my experience goes they are not as hardy as represented. I have had more failures in Russian varieties than I ever expected. I do not want to discourage you, and do not give them up hastily.

Mr. BEADLE.—Will you make out a list of those which failed, so that I may publish them?

Mr. MORRIS.—There is one encouraging feature about the fruit grown in cold sections like this, and that is, the further north it is grown the better is the quality. The keeping qualities are better. The Rhode Island Greening becomes a fall apple in the south, while in the north it becomes a good winter apple. I am sure the flavor is better on clay.

Mr. DEMPSEY.—The best apples I ever saw grew on sandy soil; but it had the benefit of a dressing of leached ashes. The application has not been repeated for eight years, and up to last fall they were the finest Northern Spys I ever saw.

RESOLUTION OF CONDOLENCE.

Moved by A. A. Wright, and seconded by J. Croil and

Resolved—That the Fruit Growers' Association of Ontario have learned with deep regret of the death of Mr. Henry S. Evans, late Secretary of the Horticultural Society of Montreal. By his removal not only has our sister Province lost one of her most able and willing workers, but a blank has been left in the entire Horticultural community which it will be hard to fill. We have all admired his estimable private character, his many Christian virtues, as well as the untiring efforts he put forth so long and so effectually in furthering the cause of Horticulture, and we regret exceedingly that he has in the Providence of God been removed at an age when he had apparently before him many years of usefulness. We beg to tender our sympathies to his widow and family in their deep affliction.

Carried by a standing vote.

The Association then adjourned until the evening.

On resuming in the evening the "Question Box" was opened.

A DESTRUCTIVE GRUB.

A sample of a grub was placed on the table, and it was announced that a gentlemen had sent it from Cornwall, where it had preyed upon his black currant bushes. A request was made that it might be named and a remedy suggested.

Mr. BEADLE.—It is the larva of a beetle, which both in the larva and perfect state feeds on plant lice. It does not eat anything but living creatures that I know of; it certainly never injures the leaves of any plant. This is one of the provisions the Almighty has made to keep things in check. When the plant lice become numerous, these enemies also become numerous. I have seen more of the lady bird, their larvæ and chrysalids this year than at any time within twenty or thirty years; they also are very numerous. The gentleman has found this larva on the under side of the leaf of his currant bush, and has taken it for granted that it was feeding on the leaf, whereas it was feeding upon the plant lice. These little fellows were doing what they could to save the currant bushes. I see that Mr. Saunders, in his work on "Insects Injurious to Fruit," speaks of this little beetle and the help it affords in keeping the aphis in check.

Mr. BEALL.—Is the whole difficulty this year from the aphis?

Mr. BEADLE.—As far as my knowledge goes it is; my neighbor called my attention to his currants and I found the bushes covered with them.

Mr. BEALL.—I imagine there are other difficulties. I think I have seen great quantities of the red spider; it is along with the aphis this year. We have had very hot dry weather, and it seems to be troublesome only then.

A CORDIAL WELCOME.

At this stage the Mayor of Lindsay was introduced, and in a speech full of kind words, welcomed the Association to the town.

Mr. DEMPSEY replied.

PLUMS.

Mr. ROBINSON (of Lindsay).—I certainly did take the prize for plums, and I have two or three kinds that are fairly successful. I have some growing now very nicely of the Lombard variety. My choice, however, is Pond's Seedling. I think most of the people know that plum trees are very liable to the curculio, they are our greatest trouble here; there are diseases among the trees, but this is the chief trouble here.

Mr. SMITH.—Are you troubled with the black knot?

Mr. ROBINSON.—I have seen none; I have heard of it, but have not seen any. I have twenty to thirty trees, mostly Lombards. I have also the Yellow Egg, Victoria and one or two other kinds.

Dr. PURCELL (of Port Hope).—I applied Paris green and destroyed the curculio and the plum too. I am anxious to learn whether others have had a similar experience; that is to have the leaves wither where the Paris green fell.

Mr. SMITH.—You have used it too strong.

Mr. PETTIT (of Winona).—It has been used a great deal in our neighbourhood and is considered a good remedy; but the gentleman who has used it here has applied it too strong. I think the proper strength is four ounces to the barrel of water. I used it myself last year, and while we had not any plums for years before, we had a very good crop.

Mr. DEMPSEY.—A teaspoonful to a pail of water is, I think, the proper strength.

Dr. PURCELL.—I used even less than that.

Mr. BEALL.—I think there is a good deal of misunderstanding with respect to the application of Paris green. I did not think there was any difficulty until the last six months, and now I think there is a good deal. There is no doubt that Paris green will be an injury to foliage in certain cases, but I am quite satisfied that it can be so applied as to effect not only a remedy but prevent injury to the tree in the least degree. My friend, the Doctor, from Port Hope, used a teaspoonful in a pail of water and he thinks that is too strong. Now, suppose he should use half a teaspoonful, he might find that to do very well: but suppose he used a teaspoonful in three gallons of water and makes it do for

half a dozen trees. It depends on how much goes on each tree. I have never experienced any harm from using Paris green, but I noticed in the *Horticulturist* a letter from my friend Mr. Thompson, who used to live in this neighbourhood. He has evidently applied the water so that his trees are all injured on one side. Now, if properly applied it would not effect the trees in that way. It should be thrown over the tree in such a way that the spray would fall in the calyx of the flower. In shooting against the tree you do not effect an equal distribution. It should fall down upon it. Then a good deal depends upon the instrument you use. One man said he got a pump and shot it into the tree. The only proper way is to use a fine rose syringe, as fine as can be obtained, and then you get your fluid so finely separated that there is practically no drop at all. It is like a fog falling on the tree. As to whether Paris green is an effectual remedy is another matter. Some six years ago I began experimenting with Paris green. I had two red plum trees standing near together, that I cared very little about. They bore large quantities of red plums every year, but they were so badly destroyed with curculio they were worth almost nothing. I applied Paris green to one and not to the other. The foliage was not injured, but on the tree I applied Paris green to I had a good crop of plums, while the other tree was as bad as in any other year. The next year I reversed the order, and applied it to the other tree and not the first one. The consequence was I had a reversed order of fruiting. There was a crop on the one I had sprayed, but not on the other. Our vice-president, Mr. MacD. Allan, in an orchard of a thousand trees, selected four trees on which the Paris green was not applied. He took every care that none fell on those trees, and he had a plentiful crop on all but those four trees. He tried four other trees the next year with the same result. It seems to me a man will not regret applying Paris green if he does so carefully. I applied it just as the blossoms are commencing to fall and just when the blossom has left the tree. The insect does not eat the Paris green, and there is nothing known to show how the effect is produced. It is sufficient to know that it is accomplished.

Dr. Cross (of St. Catharines).—I think the reason is apparent. Paris green is very caustic and prevents the curculio from laying its eggs.

Mr. Pettit.—I have found that if you spray a tree with Paris green as often as you wish and as early as advisable, you will find that a great many of the blossoms are marked by these insects. The philosophy of the thing, I have always thought, was that the poison lodges there just when the insect begins to feed on the bloom.

Mr. Robinson.—I am under the impression that it is the strong sense of smell which this insect has.

Dr. Purcell.—I applied some to two St. Lawrence apple trees, with the result that the leaves fell off the tree, and with them a great portion of my apples fell to the ground. The reason I applied it to the St. Lawrence was because of the beneficial effect upon another tree I do not know the name of. The codling moth takes them as soon as they are the size of walnuts. I had three barrels off that tree and they kept until six weeks ago. It was the success with this tree that led me to apply it to the St. Lawrence, with, however, a very different result.

Mr. Beadle.—I wish to ask this gentleman whether there is not some free arsenic in some of the Paris green. Mr. J. P. Williams, of Prince Edward County, who had a similar experience to Dr. Purcell, said he was afraid he had put it on too strong. I have this impression that arsenic of copper is not soluble in water; but if there be free arsenic, it is soluble in water, and I can understand why the leaves are scorched and fall to the ground. Perhaps there is some gentleman here can tell us whether there is anything in it.

Mr. Morton (of Wingham).—As far as the argument that it is not soluble in water and therefore cannot be injurious, is concerned, it is not valid. I do not say it is the case in this instance, but there are substances in themselves insoluble in water, which, when brought in contact with other substances, chemical decomposition takes place. It may therefore be that the arsenic set free would have the same effect as the arsenic in a mechanical compound. I do not say that has been the case in this instance, but with regard to the action of Paris green I have discovered this, that it would effect a tree at one time that it would not another. The same quantity, as near as I could come at it,

was applied in one case as in another. After giving it some attention I found almost invariably that the sun was shining brightly when it injured the leaves. Another thing is, that unless you pay close attention, you will not have an even mechanical mixture. It certainly will not dissolve, and, unless you keep it agitated, you are very apt to have one application containing a greater proportion than another.

Mr. BEALL.—There is another idea which I merely advance just now. I applied Paris green to currant bushes, gooseberry bushes, and I think to other things, and it never affected the leaves in the least. If it were free arsenic that did the injury, I should think it would affect all leaves alike. Several complaints have been made, and I have noticed that in each instance, it has been the St. Lawrence apple that has been affected. Is it not possible the leaves of that tree are more easily affected than others?

Mr. CROIL.—What kind of a syringe do you use?

Mr. BEALL.—I use one of those English fine brass syringes; It is not very large. I think it has an inch and a-quarter, or an inch and a-half bore. I paid $4.50 for mine, but they can be bought cheaper. I have nearly three hundred trees, and my man can go over them all in a day.

Mr. BEALL (of Lindsay),—As to the kind of plums that can be grown with profit in this vicinity, I am in some doubt. I have cut down a great number of plum trees, some of them five or six inches. I have in fact, given up all idea of growing them for profit. I do not think it can be done just in this locality. There may, however, be other situations within a few miles of this locality where they will succeed. I know one man in the very centre of this town who has grown the Lombard plum, and has had fine crops every year, and never had a curculio on his place. His neighbours have plenty. It is Mr. Huskell.

Mr. BEADLE.—Why can't you grow plums profitably? Is it on account of the curculio?

Mr. BEALL.—No; the trees this year showed inflorescence very large. There was a beautiful prospect of a crop, but the supply will be very limited. A light frost just comes at blooming time and destroys the blossoms. I am satisfied that the plum tree is not suitable for this soil. I do not think it is the climate.

Mr. DEMPSEY.—I think you have beautiful soil for plum trees.

Mr. BEALL.—As plum trees begin to bear the trouble begins. Overbearing kills them off. With respect to variety, I know of no other that will succeed except the Lombard.

Mr. MORTON.—Don't you think if the plums were thinned out the tree might be saved?

Mr. BEALL.—No doubt of it.

Mr. DEMPSEY.—There is one plum tree, I presume, you have never tested in Lindsay. It bears the name of our honoured President. I have had the privilege of looking at the original tree for several years, and I have never noticed the black knot on it, although the Lombards, and other varieties beside it have been covered and killed. I have never seen it fail to bear a crop so large, that the tree was in danger of breaking down. The next year it comes out green to the end of the branches. I do not know whether the tree can be had or not. When you can get it, try it. I believe it can be grown anywhere. The name is the Saunders. It is a superior plum, a trifle smaller than the Lombard, yellow in colour, and it is early. While the Lombards sell at Belleville for fifty cents a bushel, these brought $1 a peck.

Mr. BEADLE.—An abundant supply would affect the market.

GRAPES.

Mr. BEALL (of Lindsay).—I am quite satisfied that any grape can be grown here that will not ripen later than the Concord. It would require a little more care than these Yankees exhibit, but it could be done. I will leave it to others to name the varieties. While on my feet, however, I will relate a circumstance that may interest you. I fruited the Jefferson grape last year, and it was ripe when the Concords were green. I under-

stood from the originator that there was no use in sending it here, as it could not be grown in this neighbourhood. This, however, is its fourth year; but of course only a few bunches were on it. I have perhaps thirty varieties altogether, and I am satisfied there is no difficulty in getting any grape to ripen. I can get a good crop from the Agawam, which is later than the Concord.

Mr. Beadle.—This question of early bearing grapes is important. If you take a grape-vine and let it bear fully, the fruit will be from one to two weeks later in ripening than if you cut off a third. That is a fact. You can make ten days difference in the ripening of your grapes. Perhaps the Jefferson Mr. Beall speaks of, was more warmly located than the Concord.

Mr. Beall.—No; scarcely as favourable.

Mr. Beadle.—Well, it had this in its favour, it was a four year old vine and had only a few bunches on it. I thoroughly believe that in nine cases out of ten, if three fourths of the fruit were cut off, the rest would ripen.

Mr. Dempsey.—That is not the only advantage. We used to have close competitions for exotic grapes, and if we wanted to get a five pound bunch of Black Hamburgs, we used to cut off all the bunches on a vine but one or two. We would then be very careful to keep that vine well fed. We would not only cut off two-thirds of the bunches, but we would thin out the berries on each bunch. By that means we would actually get a larger bunch, but greater weight. I have tried this with grapes in open ground. If you want a close bunch remove half the berries. The vine matures better, the foliage is healthier, and the fruit will weigh more and command higher prices. I think it will pay to thin out Concord grapes. I know it pays to thin the Delawares. I have seen it set such a large crop of grapes that the foliage would fail, and they had no flavour.

Mr. Morton (of Wingham).—Mr. Dempsey might also have told us about the trick of ringing grapes for show purposes. It prevents the sap from returning, though not of going up; you get show, but no quality.

Dr. Herriman (of Lindsay).—What is the best manure?

Mr. Dempsey.—I have never found anything superior to bone dust; if I can get plenty of that I am satisfied.

Mr. Beall.—How about ashes?

Mr. Dempsey.—I apply them, but I prefer bone dust.

Mr. Morton.—What about soil?

Mr. Dempsey.—Any soil will do for grapes.

Mr. James Watson (of Lindsay).—I wish very much to know something in relation to the pruning of them. If they are very rampant in growth how should they be treated? I have been in the habit of pinching them as soon as the flowers seem to leave, and then when they get about the size of a pea I have cut them back. I have noticed that this sometimes checked them too severely. I have been very successful in growing them and have a beautiful promise, but from the heavy growth of wood I do not know what to do. I have one vine extending sideways thirty-five feet.

Mr. Pettit (of Winona).—It is a pretty difficult thing to explain pruning to a man outside of the vineyard and the vines not before you; so much depends on the strength of the vine. I have done a great deal of it and have watched the result of others' work. From the distance Mr. Watson speaks of his vine growing, I fancy he would have too much wood. The less old wood you make the vine carry the better.

A Member.—Do you prune in the summer?

Mr. Pettit.—Very little.

A Member.—Do you clip the leaves off?

Mr. Pettit.—No. The question of manure was spoken of. I have used considerable quantities of ashes and salt, and a very suitable manure consisting of a compost made of dead horses and cattle. I never found anything to answer like this compost. I made one lot of six horses and two cattle, and saw dust and muck, and after it was well rotted I used it principally on the Delawares, and I never saw such fine grapes as were grown from the use of it. My soil is a heavy wash soil from the mountain. This Jefferson grape you speak of has been rather tender with me; it winter kills. I have tried it in a row of over fifty varieties and it has done nothing. Mr. Beall says that any grape that

will ripen with the Concord will ripen here. That will give you a good list of the following varieties. viz:—Champion, Moore's Early, Massisoit, Delaware, Niagara, Jessica, Brighton and Hartford.

Mr. JOHN CROIL.—What space would you allow each vine? The old Hampton Court vine, nearly one hundred years old, and which had 1200 bunches on it, has wood nearly as thick as your leg.

Mr. PETTIT.—You cannot compare that vine with vineyard cultivation. If we were to attempt to carry that much wood, I fear there would not be much profit in it. Give them twelve feet on the trellis and ten feet between the rows; the Delaware will answer with eight feet. They should be about five feet high or a little more than that. In pruning we adopt a rough-and-ready way; we go along with something like a currant cutter and knock off the ends just as they begin to stand out and take hold of the trellis. I never, however, practice the so-called system of summer pruning. I always claimed that it is weakening to the vine and you do not get as good a setting of fruit the next year. I do not think the young wood will mature the fruit bud so well, as when these shoots are allowed to grow.

Mr. DEMPSEY (of Trenton).—I am disposed to show a good deal of charity with respect to the cultivation of grapes. My first experience in grape culture was all based upon European authority, and while the directions applied very well to exotic grapes they were were than useless when applied to our American varieties. We used to depend on the spur system, and considerably to what they called the rising and dormant bud; that is to prune as close to the old wood as we could and depend on it to raise the bud. That system is worse than useless when you undertake to practice it on American varieties. They will not mature sufficiently to produce bunches the following year or that year; so we have to adapt our methods to the variety we are dealing with. Dr. Grant, in his book on the beautiful system of training grapes, took every one of his ideas from European books; that did harm in Canada. In cultivating an American variety, we should remember that we want this year's shoot for next year's fruiting, and if we want good bunches we must take that shoot from last year's branch; thus avoiding the old wood as much as possible. I am just giving you the theory, if you can pick it up. When it comes to summer bunching, we train to two wires. We tie the fruiting canes to the wire, one about two feet from the ground and the other about five. Each branch sets from two to four bunches, and after they run out horizontally thereon we bend them down. We do not lop them off any more except in the case of the Brighton. If we did not do that we could not sell grapes at three cents per pound.

Mr. PETTIT.—I agree with what you have said. I find that beginners invariably leave too much wood. They ruin their vines thinking they have pruned them.

The Association then adjourned to meet the next afternoon in Bobcaygeon.

SECOND DAY.

The Association met on July 8th, at Bobcaygeon. The members and their friends had taken a steamer at Lindsay in the morning, and after a most enjoyable trip arrived at Sturgeon point. There the vineyard of Mr. Knowlson was visited, and methods of cultivation discussed in a general and informal way. On arriving at Bobcaygeon, lunch was partaken of, and immediately afterward the Association assembled in the Town Hall. Business was at once proceeded with.

PRESERVATION OF FRUIT.

QUESTION.—"Will Mr. Morton give the process of preservation of grapes exhibited by him at Lindsay yesterday?"

Mr. MORTON.—I do not want to claim the credit of what is not due to me. I did not preserve the grapes; I got them from my father at Brampton. The process is very simple. They take ordinary building sand, and after washing it to rid it of clay, dry

it thoroughly; then a close box is taken, and about two inches of this sand put in the bottom; the grapes are packed on top moderately close; sand is then sifted over them and shaken down, so as to fill the spaces; the top is put on and the box left in a cool dry cellar. I spoke of this to the Provincial Treasurer, and he said he had no difficulty in keeping grapes for over a year by the very same method, and that for a number of years he had been doing so. Rogers' No. 19 he found to be the best keeper. You are all aware you need not attempt this plan with some grapes. The best and most suitable are those which have a thick skin. Hon. Mr. Ross says he prefers, in putting them down, to take ordinary linen tissue paper and wrap each bunch in it before putting on the sand. This prevents the sand from touching them, as when one bursts or shrivels up the sand adheres to it and some of the mucous attaches to others.

Mr. Beadle.—I want to call your attention to two articles which appeared, one in the July number of the *Horticulturist* and the other in the previous number, in which an account is given of Mr. Torrance's discovery of infusorial earth and its preservative qualities when applied to fruit. His theory is that it preserves the fruit by excluding the atmosphere, preventing the least possible change in temperature and permitting no moisture to enter. This uniform temperature, he contends, will keep fruit a long time. Some autumn apples which he put away in a box with infusorial earth about it, was not opened, I think, until May, and the apples were still fresh. The apple used was the Alexander, a fine showy fruit, which is not a long keeper. This earth is found in Nova Scotia and is composed of minute shells. If plums or peaches were to be preserved, his method is to wrap each specimen in tissue paper, place them in trays and put this infusorial earth over, so as to fill all the interstices, then place the trays in a box and sprinkle the earth into it so as to fill all the remaining spaces. Then the box is set away wherever you like. He thinks it is impossible, no matter where you set it, for any heat to get in. Mr. Jack, of Beauharnois, tried keeping some grapes, so Mr. Bucke writes me, and he forgot all about them being out in his shed until the thermometer had gone down below zero. He placed the box in his cellar, and when he opened it in the winter, he found the fruit in fine condition, sound and fresh. Mr. Chas. Gibb, of Abbotsford, tried keeping some butter for a time in this infusorial earth, to see if it would impart any flavour to it; but after keeping it a week, he could not detect the slightest change. The butter was as sweet as when it went in. The inference is that this stuff is inodorous, and possesses no power of communicating flavour, and yet has the power of maintaining a uniform temperature, and keeping out the atmosphere, and moisture.

RESOLUTION OF REGRET.

On motion of Mr. D. W. Beadle, seconded by Mr. Morton, the following resolution was unanimously adopted:—

Resolved.—That this Association desires to express deep regret that we have not been permitted to enjoy the pleasure of meeting with one of its esteemed members, Mr. John Knowlson, who has been a pioneer in grape culture in this vicinity.

BAGGING GRAPES ON THE VINES.

Mr. A. M. Smith (of St. Catharines).—I should like to ask if any of the members have had any experience in bagging grapes on the vines. It is receiving attention on the other side of the line and from the results that are reported, it is a desirable thing to test. It is said to be a protection from rot and mildew, and I understand has had the affect of producing a finer appearing fruit.

Mr. Pettit.—I have not had any experience, but have often thought I would try it; I know it has been largely carried on in Ohio, on account of the rot.

Mr. A. A. Wright (of Renfrew).—I always bag the specimens I am going to exhibit. I take a two pound, satchel bottom, manilla paper bag; but before I put in my fruit I

clip off the corners of the bottom. Then you slip the bag over your bunch of grapes when the grapes are about the size of a small pea and tie a string around it. It is a splendid protection in many ways. Your bunch is better and children do not pick off the berries, nor chickens get at them.

Mr. SMITH.—I have been informed that the bags may be had for seventy-five cents a thousand, and girls can pin them on for a very small percentage on that price. I have seen fine samples of fruit that had been grown that way.

Mr. PETTIT.—I would like to ask Mr. Wright if he gets his grapes a good colour and plump?

Mr. WRIGHT.—I always thought I got a better specimen in every way, and if the frost happens to come the bag protects the grapes.

Mr. WANZER (of Hamilton).—I have bagged grapes to protect them from wasps in certain seasons of the year, but I always found those bunches to be more or less rubbed, especially if they were where the wind could get any play at them.

GRAPES.

Mr. BEALL (of Lindsay).—I would like to go back to the subject of preserving fruits. In this neighbourhood there are, I believe, a great many deposits of infusorial earth and if any are discovered of good quality it would be well to make the matter known.

Mr. BICK (of Bobcaygeon).—We have tried some of the earth in this neighbourhood without success. Let me now ask a question: I have been troubled with frost in the fall; what sorts of grapes would be likely to answer best?

Mr. MORRIS (of Fonthill).—Perhaps the Champion would be most suitable for this section. The Hartford, Early Victor, Moore's Early, and if the Concord will ripen in Lindsay, it also should ripen here.

Mr. PETTIT.—I would add Wyoming Red; it is early and would be a relief from the black.

Mr. WRIGHT.—I would add Brighton also, for red.

Mr. A. M. SMITH.—And Jessica for white.

Mr. THOMPSON (of Bobcaygeon).—I do not know much about grapes, but I believe it is hard to get them to grow here. Why, I do not know.

Mr. WRIGHT.—Cannot you get them to grow?

Mr. BICK (of Bobcaygeon).—Yes.

Mr. WRIGHT.—You no doubt have varieties that ripen too late; but if you get those that have been named you will be safe. The Martha and Lady will also ripen early, as well as those named.

Mr. THOMPSON.—I think the Brighton grape has been chiefly grafted here.

TULIPS AND GLADIOLI.

Mr. BEADLE (of St. Catharines).—I have not had much experience in cultivating tulips. I get a few every once and a while and put them in the ground and let them stay there until they run out. I have never taken them up at all, or taken any trouble with them. They will stay in the ground in our climate, but they run out after a time. They do not come true to colour after a few years. This matter of growing tulips is one largely dependent on skill and knowledge of the subject. In Holland, where so many are grown, great attention and study are put into the work. They sow seeds and grow tulips, and then handle them in such a way as to break the colours and secure rich blendings. I suppose the best and cheapest way is to do as I have done unless you find that winter kills them and then I say, take them up and after they have died down, pack them in sand and put them in your cellar; then put them in the ground in the spring as

early as you can get them out. Now, with reference to the gladiolus, it wants altogether different treatment. It will not endure the winter in the ground even where I live, unless we cover the ground in such a way as to keep the frost out. In preference, to that, however, I take up the bulbs in the autumn before the ground freezes and take off all the little bulblets that have formed on the main bulb. If I want to multiply my stock I save these little bulblets; if not I throw them away. Then I take these bulbs and put them in perfectly dry sand. If there is any moisture the bulbs will decay. The mice are very fond of them and you must see that they cannot get at them. Apart from the mice, keep them dry and cool, where they will not freeze, and planting them out in the spring as early as you like. Give them, if you can, a light sandy soil. Now, to come back to the little bulblets, by which you increase your stock. You may put these into a paper bag and hang it up and let them stay there one summer and plant them the following spring. If you plant them the very next summer, ten to one you lose all of them. If, however, you plant them the year after, they are much more likely to grow and do well.

Mr. Hillborn (of Arkona).—To what depth do you plant bulbs?

Mr. Beadle.—Three inches.

Mr. Hillborn.—Some say six to eight inches.

Mr. Beadle.—I never do it.

Mr. Wright.—I never put them in sand. I simply throw them into a cheese box and leave it on the potato bin.

Mr. Beadle.—Mine would shrivel up if I did that.

Mr. Dempsey.—My wife just keeps them in a little basket.

Mr. Morris.—I pack them up about the first of August, and place them in the greenhouse in the shade so that the sun will not strike them. I let them lie there until the first of October, and plant them out again.

Mr. Croil.—It is the simplest way to keep your bed clean to follow Mr. Morris' plan.

Mr. Douglas (of Manilla).—Does going to seed destroy them?

Mr. Morton (of Winghaun).—The whole effort of the plant is to go to seed. If growers of pansies want to show flowers, they keep taking off the first bloom before the seed has become set and the vigour is thrown into later blossom. The way I do is to cut off the stem as soon as the blossom is past.

APPLES.

Mr. Burchard (of Bobcaygeon).—One of the greatest causes of failure here is the apple tree borer. We lose more trees from that cause than any other.

Mr. Dempsey.—Wash your trees with soft soap thinned with lye to the consistency of paint. Do that every year, and if the borer is tempted to deposit his eggs at the base of the tree, the washing down of this alkali will prevent him.

Mr. Beadle.—That is what I have used and found effective.

Mr. Dempsey.—One application is sufficient.

Mr. Beadle.—Kill the borer already in the tree with a bit of wire.

Mr. Beck.—Is whitewashing an injury to the trees?

Mr. Dempsey.—No; but it does no good. It does no harm and it may do a little good.

Mr. Eustess (of Bobcaygeon).—What I have noticed here and in other places, is that when our trees come to be bearing nicely, they begin to die. If you could name some varieties you think I would do well to plant, I shall be pleased to hear them.

Mr. Morris (of Foothill).—This question was gone over so thoroughly yesterday, that I do not think it necessary for me to repeat what was then said; but let me correct a false impression which this gentleman has formed respecting late cultivation. He thinks ploughing in the fall is late cultivation. I call it late cultivation in the middle of summer after the trees have ripened and formed their terminal buds for the season. I do not think any cultivation after that will affect them injuriously.

Mr. FAIRBAIRN (of Bobcaygeon).—I have tried to cultivate an orchard. I have gone in for fine fruits, but they have invariably failed. Of the Tolman Sweet I do not think I have ever lost one. I do not know ten varieties that would grow here. Some Snow apples bore six or seven years, but they are all gone.

Mr. DEMPSEY.—Have you planted the Duchess of Oldenburg?

Mr. FAIRBAIRN.—Yes; and they are doing well.

Mr. DEMPSEY.—Have you the Wealthy?

Mr. FAIRBAIRN.—I have not.

Mr. DEMPSEY.—Have you the Walbridge?

Mr. FAIRBAIRN.—A few.

Mr. DEMPSEY.—Does the Golden Russet fail?

Mr. FAIRBAIRN.—No; they have flourished. The borer attacked them, but we tried this remedy you speak of and it drove them off?

MR. DEMPSEY.—I think if the varieties you have named will do well here, you can get twenty others.

Mr. ROBINSON.—Have you tried the St. Lawrence?

Mr. FAIRBAIRN.—Yes; and they are doing pretty well.

Mr. ROBINSON.—Have you tried the Alexander?

Mr. FAIRBAIRN.—I have very few.

Mr. WRIGHT (of Renfrew).—If you plant the Wealthy you will find it very good. I will also suggest the Yellow Transparent, which ripens early, but does not keep very long. It is very hardy. Another is the Peach, of Montreal. I would not advise you to plant many of those as they will not ship.

Mr. DEMPSEY.—What is the difference between the Irish Peach and the Peach, of Montreal.

Mr. BEADLE.—They are not identical.

Mr. WRIGHT.—The Duchess of Oldenburg is very hardy. The Alexander and Scott's Winter is a fine red apple and does nicely. It keeps right into the winter. I have the McIntosh Red. It does not stand the cold with me, but it ought to here, if you can grow the Russet and Tolman Sweet.

Mr. CROIL (of Aultsville).—The McIntosh Red spots badly.

Mr. WRIGHT.—You can grow the Tetofsky and Walbridge, but the former is not so good as the Yellow Transparent, and the fruit drops badly from the tree. If you desire a crab apple, I would advise you to buy Whitney's No. 20.

Mr. MORRIS (of Fonthill).—I will give you the best I think advisable for you to try:—Wealthy, Duchess of Oldenburg, Yellow Transparent, Walbridge. American Golden Russett, Alexander, St. Lawrence, Canada Baldwin, and Mann. The list could be extended by adding Ben Davis, Scott's Winter, and a dozen more could be grown here.

MR. WRIGHT.—We have tried the Mann apple in Renfrew and it will not grow. It winter kills every time. It is a splendid keeper, and if you can grow it here, I would advise you to get it. Plant two to one of the Wealthy.

Mr. DEMPSEY.—I would commence by planting Yellow Transparent, and then the Duchess to follow. The Wealthy next, and then I would plant my winter apples. The Wealthy would go into December. I know all of these apples I have mentioned are good ones and will give you satisfaction, and are hardy wherever I have seen them growing.

Mr. BICK (of Bobcaygeon).—I planted an orchard about twenty years ago, of two hundred trees—the Golden Russet, Tolman Sweet, Northern Spy and Snow apple are living yet; all the rest died.

Mr. ROBINSON.—How long will the Yellow Transparent keep?

Mr. DEMPSEY.—If it is ripe at breakfast time eat it. It is one advantage, however, that you may have Yellow Transparent for ten days or more. The fruit ripens unevenly, and when you have a specimen fit to use, you will keep finding others until they are all gone. They come in ahead of the Duchess; they come in with the Early Harvest.

HEDGES.

Mr. BEALL (of Lindsay).—I have tried Native spruce for a hedge, and I like it very much; but during the last few years I thought I would rather take Norway spruce. I thought the Native spruce was the best we could get; but if I were going to plant another hedge, I would take the Norway. We can get Norway spruce that has been two or three times transplanted, and I think it makes a better hedge than the Native. The Arbor Vitæ would make a good hedge. The proper time to plant, I think, is in the spring of the year. If I could get at them, I would take them up when they make the first start in the spring, and have them planted the same day; that would be somewhere about the middle of May, or the latter part. I would plant Norway spruce two feet apart, and I think they should be pruned once a year, sometime about the first of August, or just about when the trees have made all their growth.

Mr. MORRIS (of Fonthill).—There are two spruces natives of this country. The Black spruce is not worth anything, but the White spruce is better than the Norway. I do not know whether it can be got in this neighbourhood or not. Next to that the Norway spruce is best. I differ, however, from Mr. Beall as to the time of pruning. I would prune about the middle of June. At that time the new buds would form back of where it was cut, which would not be the case in August.

Mr. HILLBORN (of Arkona).—For a wind-break I like the Scotch pine. It grows much more rapidly.

Mr. J. CROIL (of Aultsville).—Nothing makes a prettier fence than cedar. We take the trees from the bush on a wet day, dig a ditch and put them in closely. Cover over the earth and you will hardly ever see a failure.

Mr. A. M. SMITH (of St. Catharines).—I have grown fine hedges from cedar and spruce, and I agree with Mr. Morris as to the time of pruning.

Mr. BICK (of Bobcaygeon).—Mr. Boyle has a fine hedge, and he has been pruning every day since the first of May.

Mr. BOYLE (of Bobcaygeon).—And some of them look pretty sick. My trees have been pruned so much there is hardly anything left to judge by. I do not know what shape to prune them into. I never cut the bottom, but the top, and I should like information on the subject.

Mr. BEADLE.—I have some notions about that, but perhaps they are only notions. If you wish to confine your hedges within any space, you must shear them; but I think the prettiest American white spruce or Norway's I ever saw, were those which grew just as nature taught them, and upon which the knife had not been used. When the branches are straggling out you can pinch off those that are ahead quite easily, and in time they branch out regularly. You can make your hedges quite symmetrical, but in nine cases out of ten, they will grow that way themselves.

Mr. MORRIS.—I do not think that Norway spruce should be planted on the side of a house. Smaller evergreens are preferable, and I think the Arbor Vitæ is the prettiest of all trees for a lawn. Hedges must be pruned of course.

Mr. BEADLE.—I should make a light hedge in the shape of an acute triangle. It stands the snow best.

Mr. BOYLE.—Is the month of June too late to transplant?

Mr. BEADLE.—I would prefer to plant just as soon as the buds begin to push out.

This closed the discussion, as the members were obliged to leave in order to catch the boat.

FRUITS IN NORTH SIMCOE.

The following report on fruits in North Simcoe was handed in by Mr. G. C. Caston, of Vespra:

The Season of 1886 has been a very favourable one for fruit in this section of country, as those who visited our Central Exhibition at Barrie can testify. People from southern and more favoured localities, were surprised at the display of apples and grapes grown in

this northern county. The specimen of grapes, especially some of Rogers Hybrids, could scarcely be excelled anywhere in Ontario. Although the weather has been very wet and broken, yet we have had no frost severe enough to kill grape-vines, and the foliage is as green now in the middle of October as it was in August, so that all the varieties have ripened perfectly. Moore's Early, Early Victor, Worden, Vergennes, Prentiss, Rogers' No. 3, 15, 19, and the Concord, have all ripened well with me. Worden and Champion were the first to ripen—both about the same time, the Concord being the last and latest; and I would advise beginners not to plant too many Concords. What is wanted here in a grape, is early ripening, combined with hardiness and good quality. The Concord has proved very hardy with me but is too late in ripening. As for mildew, that is a thing we know nothing of here so far; and if we put down our vines and cover them in winter they come through safe, and if we can only get our grapes to ripen early enough to escape the frost, I do not see why grape culture should not be a successful and profitable enterprise, even so far north as Simcoe County.

Strawberries were a fair crop, although affected somewhat by the hot dry weather of July. I grow the Wilson, Sharpless, Crescent and Triomphe De Gande. I prefer the Wilson and Crescent; they have done the best with me.

Raspberries are not much cultivated here owing to an abundant wild crop. I have the Cuthbert and the Gregg; I don't wish anything better, and I doubt if anything better can be found at present.

The Apple Crop will be a fair average one, although there is a great deal of fungoid or spotted fruit, the Snow, Red Astrachan, Early Strawberry, and many other varieties being badly spotted. Golden Russets are very fine. The Wealthy is one of the coming apples for this county; it seems to be as hardy as the Duchess, bears early and perfectly free from spots. Another kind likely to do well here is the Pewaukee; it is a fine, clean, hard fruit here, and seems perfectly hardy.

Plums have been a comparative failure with me; I have tried a good many varieties, but they always die as soon as they get about large enough to bear, and the only way I have succeeded in raising a few of the finer kinds, is by top grafting them into native seedlings.

I believe that we must look largely to Russia for a list of hardy fruits suitable to the colder parts of Canada. I am one of those who believe that it will never do to take fruit from a warm climate to a colder one; but that in order to succeed, you must get a fruit that has been acclimated in a country colder than our own. And the sooner our nurserymen take hold of the Russian fruits, the better for them and their customers. I would also suggest that some arrangements should be made next year between the Fruit Growers' Association and the Directors of our large central exhibitions, whereby some competent Pomologist might be appointed to visit our principal fairs and see that the fruit is properly named, and correct any errors that may be made. Often samples of fruit are thrown out by the Judges because incorrectly named, and very often the Judges are wrong themselves and do not know the names of some of the fruit on exhibition. I think the Fruit Growers' Association should make the appointment and the Directors should pay the expenses. It would be well worth all it cost to have proper classification and nomenclature, and thus save all disputes.

FRUIT COMMITTEE'S REPORT.

Report of the Committee on Fruits exhibited at the meeting of the Fruit Growers Association of Ontario, at Stratford, February, 1886.

PEARS.—Messrs. Ellwanger & Barry, Rochester, N.Y., exhibited twelve plates of pears, in a fine state of preservation, consisting of the following varieties: Beurre Alexander Lucan, resembling Belle Lucrative in appearance, quality good; the Winter Nelis, an extra sample, in good condition, quality good; Columbia, extra size, beautiful in appearance, quality not so good; Beurre D'Anjou, very fine sample, large and well-flavoured; Winter Beurre Grise, a remarkably fine large russet pear, not yet fully matured; Beurre Easter, fine size, and when fully matured, of good quality; Doyenne

D'Alencon, medium in size and quality; Clapp's No. 64, a high coloured beautiful pear, resembling Clapp's Favourite in size and appearance, and very fine quality. Duhamel resembling a medium sized Flemish Beauty, quality good.

Apples.—From A. M. Smith, St. Catharines:—Princess Louise, a new variety, beautiful in colour, resembling Maiden's Blush, mild, subacid, good; Rhode Island Greening, fair sample, old variety; Northern Spy, medium sample; American Golden Russet, good sample; the Twenty Ounce Pippin and the Cranberry Pippin, fair.

The Stratford Horticultural Society showed a collection of twenty five plates, consisting of King, Baldwin, Spy, American Golden Russet, Swaar, Swazie Pomme Grise, and others, being fair to good samples and in good condition.

Three plates of apples, shown by Mr. John Dempsey, of Baldwin, Spy and others, fair samples.

Eleven plates, shown by Nelson Monteith:—King, Spy, Fall Pippin, Spitzenburgh, Snow and others—fair samples and well kept; also one plate of Vicar of Winkfield Pears, a very good sample and sound. A plate of apples, said to be seedlings of Northern Spy, appears to be of no special merit.

Two plates of apples shown by I. P. Woods—Northern Spy and Ribston Pippin—very fine samples, well kept, in fact the best samples shown.

Grapes.—By A. M. Smith, St. Catharines:—the Niagara; the first of the kind shown here, a fine white grape, quality good and hanging well to the bunch, showing signs of being a splendid keeper and shipper; Vergennes, large red grape, in good condition and medium quality, a good shipper.

By George Sanderson, of Catawba, N. Y., the Catawba in splendid condition and decided flavour, old and well known.

A Seedling Apple shown by F. O'Brien, of Hibbert, size large, splashed with red on light green ground, open calyx, good quality and well worthy of extended trial; by far the best seedling exhibited.

P. R. JARVIS, Chairman.
A. GILCHRIST.
W. W. HILBORN,
Members of the Committee.

NINETEENTH ANNUAL REPORT

OF THE

INSPECTOR OF PRISONS AND PUBLIC CHARITIES

UPON THE

COMMON GAOLS,

PRISONS AND REFORMATORIES

OF THE

PROVINCE OF ONTARIO.

BEING FOR THE YEAR ENDING 30th SEPTEMBER,

1886.

Printed by Order of the Legislative Assembly.

Toronto:
PRINTED BY WARWICK & SONS, 26 AND 28 FRONT STREET WEST.
1887.

OFFICE OF THE
INSPECTOR OF PRISONS AND PUBLIC CHARITIES, ONTARIO,
PARLIAMENT BUILDINGS, TORONTO, October, 1886.

SIR.—I have the honour to transmit herewith, to be presented to His Honour, the Lieutenant-Governor, the Nineteenth Annual Report upon the Common Gaols, Prisons and Reformatories of the Province of Ontario, being for the official year ending on the 30th September, 1886.

I have the honour to be, Sir,
Your most obedient servant,

R. CHRISTIE,
Inspector.

The Honourable
ARTHUR STURGIS HARDY, Q.C., M.P.P.,
Secretary for the Province of Ontario,
Toronto.

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COMMON GAOLS, PRISONS AND REFORMATORIES.

NINETEENTH

ANNUAL REPORT

OF THE

Inspector of Prisons & Public Charities

FOR THE

PROVINCE OF ONTARIO.

PARLIAMENT BUILDINGS,
Toronto, October, 1886.

To the Honourable JOHN BEVERLEY ROBINSON,
Lieutenant-Governor of the Province of Ontario.

MAY IT PLEASE YOUR HONOUR:—

Herewith I beg to submit the Nineteenth Annual Report upon the Common Gaols, Prisons and Reformatories of the Province of Ontario, being for the official year ending 30th September, 1886.

I have the honour to be,
Your Honour's most obedient servant,

R. CHRISTIE,
Inspector.

COMMON GAOLS.

At the outset of this, the Nineteenth Annual Report upon the Common Gaols of Ontario, I am glad to be able to state that the commitments, during the period to be touched upon in that report, are less in number than in the preceding twelve months. The first statistical table shews the number of commitments each year since the 1st October, 1868, under the divisions of adult men, boys under 16, adult women, girls under 16; and it will be noticed that, so far as 1886 is concerned, there is a reduction in the commitments of each class.

	Men over 16 years of age.	Boys under 16 years of age.	Women over 16 years of age.	Girls under 16 years of age.	Total.
Commitments for the year ending 30th Sept., 1869	3599	294	1680	82	5655
" " " 1870	4215	319	1737	108	6379
" " " 1871	4586	329	1642	58	6615
" " " 1872	5006	281	1615	56	6958
" " " 1873	5745	323	1735	74	7877
" " " 1874	7298	377	1746	67	9488
" " " 1875	8048	389	1566	70	10073
" " " 1876	9005	434	1727	70	11236
" " " 1877	11053	542	1824	62	13481
" " " 1878	9537	480	1959	54	12030
" " " 1879	8995	416	1756	53	11220
" " " 1880	8829	549	1863	59	11300
" " " 1881	7007	468	1681	73	9229
" " " 1882	7286	522	1750	62	9620
" " " 1883	7858	423	1551	48	9880
" " " 1884	9858	458	1719	46	12081
" " " 1885	9419	450	1507	50	11426
" " " 1886	8831	352	1424	38	10645

It will be seen from these figures that the total commitments numbered 10,645, a reduction of 781, as compared with the previous year, or 6.83 per cent. The commitments of adult men numbered 8,831, a reduction of 588 or 6.24 per cent.; the commitments of boys numbered 352, a reduction of 98, or 21.77 per cent.; the commitments of adult women numbered 1,424, a reduction of 83, or 5.50 per cent.; and the commitments of girls numbered 38, a reduction of 12, or 24 per cent.

The next table shews the number of prisoners (male and female) committed to each gaol during 1885 and 1886, and the increase or decrease in the commitments of the latter year as compared with the former.

NAME OF GAOL.	Number of prisoners committed in the year ended Sept. 30th, 1886.			Number of persons committed in the year ended Sept. 30th, 1885.			Increase.			Decrease.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Barrie	207	29	236	375	30	405	....	....	....	168	1	169
Berlin	62	3	65	71	5	76	....	....	....	9	2	11
Belleville	155	31	186	167	26	193	....	5	5	12	....	12
Brantford	201	32	233	136	21	157	65	11	76	....	....	....
Brampton	242	5	247	182	4	186	60	1	61	....	....	....
Brockville	141	19	160	186	28	214	....	....	....	45	9	54
Cayuga	113	12	125	98	12	110	15	....	15	....	....	....
Cornwall	44	6	50	40	3	43	4	3	7	....	....	....
Cobourg	88	8	96	126	11	137	....	....	....	38	3	41
Chatham	91	12	103	110	11	121	....	1	1	19	....	19
Goderich	52	10	62	53	8	61	....	2	2	1	....	1
Guelph	82	5	87	106	12	118	....	....	....	24	7	31
Hamilton	816	137	953	858	145	1003	....	....	....	42	8	50
Kingston	133	24	157	142	42	184	....	....	....	9	18	27
London	704	98	801	674	114	788	29	....	29	....	16	16
Lindsay	52	2	54	65	6	71	....	....	....	13	4	17
L'Orignal	14	6	20	23	5	28	....	1	1	9	....	9
Milton	368	5	373	245	7	252	123	....	123	....	2	2
Napanee	43	5	48	50	9	59	....	....	....	7	4	11
Ottawa	613	99	712	524	113	637	89	....	89	....	14	14
Owen Sound	178	22	200	208	20	228	....	2	2	30	....	30
Orangeville	47	10	57	53	10	63	....	....	....	6	....	6
Perth	69	13	82	72	14	86	....	....	....	3	1	4
Peterboro'	76	4	80	61	8	69	15	....	15	....	4	4
Pembroke	60	12	72	119	12	131	....	....	....	59	....	59
Peterboro'	103	3	106	110	10	120	....	....	....	7	7	14
Port Arthur	108	12	120	174	12	186	....	....	....	66	....	66
Rat Portage	87	17	104	118	11	129	....	6	6	31	....	31
Simcoe	86	9	95	71	3	74	15	6	21	....	....	....
St. Catharines	111	6	117	86	13	99	25	....	25	....	7	7
Sarnia	265	13	278	333	9	342	....	4	4	68	....	68
Stratford	136	12	148	139	12	151	....	....	....	3	....	3
Sandwich	148	25	173	166	36	202	....	....	....	18	11	29
St. Thomas	113	13	126	185	23	208	....	....	....	72	10	82
Sault Ste. Marie	33	2	35	41	2	43	....	....	....	8	....	8
Toronto	2499	701	3200	2698	701	3397	....	....	....	197	....	197
Walkerton	76	12	88	60	7	67	16	5	21	....	....	....
Woodstock	287	9	296	355	12	367	....	....	....	68	3	71
Welland	240	5	245	294	5	299	....	....	....	54	....	54
Whitby	65	5	70	100	12	112	....	....	....	35	7	42
Lock-ups—												
Bracebridge	19	1	20	101	4	105	....	....	....	82	3	85
Coe Hill	3	....	3	....	....	....	3	....	3	....	....	....
Little Current	8	....	8	12	4	16	....	....	....	4	4	8
Manitowaning	18	....	18	10	....	10	8	....	8	....	....	....
Mattawa	36	7	43	28	1	29	8	6	14	....	....	....
Parry Sound	13	1	14	4	....	4	9	1	10	....	....	....
Silver Lake	....	....	....	....	....	....	....	....	....	....	....	....
Muskoka	4	....	4	....	....	....	4	....	4	....	....	....
Haliburton	....	....	....	....	....	....	....	....	....	....	....	....
Sudbury	6	1	7	11	2	13	....	....	....	5	1	6
Huntsville	2	....	2	31	2	33	....	....	....	29	2	31
Fort William	58	8	66	....	....	....	58	8	66	....	....	....
Total	9474	1471	10945	9826	1967	11793	548	92	640	1241	148	1389

In Toronto, the falling off in the number of commitments was greater than anywhere else. There the number of male prisoners was reduced by 197, but the female prisoners numbered the same as in the preceding year. In Barrie and Bracebridge there were also large reductions, caused principally by the cessation of railway works. Guelph, Hamilton, Kingston and St. Thomas likewise shew decreased commitments; Ottawa, London, St. Catharines and Brantford shew increases.

The annexed tables shew the number of commitments in each of the past ten years, divided into five classifications:

1. CRIMES AGAINST THE PERSON.

	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.	1886.
Assault, common	743	641	724	549	623	556	576	572	586	672	501
Assault, felonious	124	134	98	125	85	88	124	51	146	169	186
Cutting and wounding, stabbing and shooting with intent	127	92	71	62	63	40	73	52	50	46	94
Rape, and assault with intent	48	39	37	45	44	36	56	46	44	68	39
Murder	30	39	24	25	42	23	29	30	45	25	32
Manslaughter	12	7	6	60	7	7	9	12	20	12	6
Attempt at suicide	1	7	11	6	9	8	10	8	10	5	10
Miscellaneous	43	31	38	25	31	95	43	48	32	46	39
	1128	990	1009	847	904	853	920	859	933	1043	907

2. CRIMES AGAINST PROPERTY.

Arson and incendiarism	45	35	47	49	31	22	23	47	24	35	43
Burglary	63	58	89	103	93	44	63	61	44	51	73
Counterfeiting and passing counterfeit money	21	23	10	19	15	15	11	1	5	10	9
Destroying and injuring property	104	115	138	126	130	67	138	80	122	112	92
Embezzlement	21	24	29	28	23	17	19	25	36	32	26
Forgery	46	31	48	64	50	30	34	35	30	60	52
Fraud, and obtaining money or goods under false pretences	140	137	151	131	101	82	106	106	113	149	118
Horse, cattle and sheep stealing	75	84	89	86	70	54	73	49	63	73	77
Housebreaking and robbery	62	43	57	102	103	80	67	61	156	146	124
Larceny	1764	2070	1818	1626	1669	1363	1401	1278	1742	1589	1396
Receiving stolen goods	54	38	64	38	42	26	45	33	34	38	47
Trespass	49	73	103	122	123	112	110	120	238	222	195
Miscellaneous	50	42	43	29	73	78	85	93	69	97	62
	2494	2773	2686	2523	2523	1990	2175	1989	2676	2614	2314

3. CRIMES AGAINST PUBLIC MORALS AND DECENCY.

Bigamy	12	12	9	14	5	6	10	6	7	13	13
Inmates and frequenters of houses of ill-fame	129	137	197	189	236	171	194	133	183	172	181
Keeping houses of ill-fame	81	89	117	92	134	102	137	130	106	85	71
Perjury	12	32	25	25	27	15	15	8	12	19	5
Seduction	3	2	2	2	.....	.....	.....	1	.....	2	.....
Indecent assault and exposure	45	27	40	41	40	38	32	45	48	40	48
Miscellaneous	49	116	129	89	50	67	78	13	62	45	28
	331	415	519	449	492	399	466	366	418	376	346

4. OFFENCES AGAINST PUBLIC ORDER AND PEACE.

	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.	1886.
Abusive and obscene language.	71	73	101	72	95	65	55	87	76	44	59
Breaches of peace, breaches of by-laws, escapes from and obstructing constables	116	90	143	130	109	83	91	137	156	117	136
Carrying unlawful weapons	13	25	37	27	34	43	42	35	49	29	38
Deserting employment	45	21	27	10	27	18	41	30	8	3	4
Drunk and disorderly	3868	4032	3785	3581	3795	3328	3497	3895	4650	3696	3555
Selling liquor without license, and selling or giving it to Indians	53	160	153	122	115	83	70	53	71	60	106
Threatening and seditious language	83	48	36	48	48	57	26	50	22	47	52
Vagrancy	2128	3888	2524	2536	2210	1580	1449	1554	2130	2455	2243
Miscellaneous	156	217	260	174	207	131	120	227	179	220	166
	6533	8544	7066	6700	6640	5388	5391	6068	7341	6671	6350

5. OTHER CAUSES FOR WHICH PERSONS WERE DETAINED AS PRISONERS.

Contempt of Court	90	136	133	149	180	124	76	97	107	120	113
Debtors	72	60	67	72	86	46	59	64	53	63	47
Detained as witnesses	29	17	31	12	18	17	16	21	19	18	20
Lunatics and persons dangerous to be at large	348	336	307	339	346	338	432	345	433	433	470
Non-payment of fines and costs	42	41	39	.....	.....	.....	.....	.....	.....	.....	.....
Want of sureties to keep the peace	169	159	173	129	111	74	88	101	101	88	78
	750	749	750	701	741	599	688	628	713	722	728
Total number of persons committed for the respective years	11236	13481	12030	11220	11300	9229	9620	9880	12081	11426	10645

As compared with the previous year, the commitments under the first heading have generally decreased, while under the sub-divisions of felonious assault, cutting and wounding and murder, the committals have increased.

The committals for crimes against property have generally decreased, but there are small increases under the sub-headings of arson, burglary, horse stealing, and receiving stolen goods.

There is a small decrease in the number of commitments for crimes against public morals and decency, the third division of the foregoing table.

Under the fourth head, offences against public order and peace, there is also a small decrease of 321, caused by the fewer commitments for drunkenness and vagrancy, there being a decrease of 141 in the committals for the former offence, and of 212 for the latter. The ratio which the commitments for drunkenness bear to the total commitments is 33.39 per cent.; a slight increase as compared with 1885, but a lower ratio than in 1884 and 1883, when the percentage was 38.49 and 39.42, respectively.

A table shewing the number commitments to each gaol for drunkenness during the years 1884, 1885 and 1886, is annexed. The figures for 1885 and 1886 are compared and the increases or decreases in each place are shewn.

GAOLS.	Commitments for drunkenness during year ending 30th Sept., 1884.	Commitments for drunkenness during year ending 30th Sept., 1885.	Commitments for drunkenness during year ending 30th Sept., 1886.	Increase or Decrease during year ending 30th Sept., 1886.	
				Increase.	Decrease.
Barrie	99	31	35	4	.....
Berlin	11	7	4	.....	3
Belleville	50	45	34	.....	11
Brantford	58	28	91	63	.....
Brampton	10	24	10	.....	14
Brockville	135	80	36	.....	44
Cayuga	7	18	15	.....	3
Cornwall	9	3	1	.....	2
Cobourg	26	26	15	.....	11
Chatham	26	18	14	.....	4
Goderich	4	3	4	1	.....
Guelph	49	32	12	.....	20
Hamilton	295	368	385	17	.....
Kingston	75	74	58	.....	16
London	445	277	338	61	.....
Lindsay	20	13	1	.....	12
L'Orignal	.....	3	1	.....	2
Milton	6	9	13	4	.....
Napanee	20	6	3	.....	3
Ottawa	314	205	280	75	.....
Owen Sound	28	36	20	.....	16
Orangeville	1	1	3	2	.....
Perth	7	6	4	.....	2
Picton	46	41	54	13	.....
Pembroke	27	11	2	.....	9
Peterboro'	30	27	13	.....	14
Port Arthur	544	66	30	.....	36
Rat Portage	161	87	53	.....	34
Simcoe	17	4	6	2	.....
St. Catharines	39	29	21	.....	8
Sarnia	105	130	72	.....	58
Stratford	14	17	15	.....	2
Sandwich	103	47	31	.....	16
St. Thomas	82	57	30	.....	27
Sault Ste. Marie	3	2	1	.....	1
Toronto	1661	1707	1705	.....	2
Walkerton	3	.....	2	2	.....
Woodstock	51	21	28	7	.....
Welland	23	33	40	7	.....
Whitby	1	4	.....	.....	4
Lock-ups:—					
Bracebridge	13	67	7	.....	60
Little Current	1	7	3	.....	4
Manitowaning	11	3	13	10	.....
Mattawa	11	6	13	7	.....
Parry Sound	3	.....	.....	.....	.....
Huntsville	.....	17	1	.....	16
Sudbury	6	.....	2	2	.....
Fort William	.....	.....	36	36	.....
Totals	4650	3696	3555	313	454
Actual decrease in 1886, compared with 1885	.....	.....	.....	.....	141

The disposition made of the persons committed to the gaols of the Province is set forth in the table printed below :—

Acquitted on being brought to trial, and discharged	2285
Discharged without trial by order of judges, magistrates, and courts, including remand cases	1119
Detained for want of sureties to keep the peace	90
Detained as witnesses	18
Detained as fraudulent debtors	53
Detained as lunatics, idiots, and persons unsafe to be at large	470
Died before trial	3
Detained by civil processes other than above	17
Waiting trial and otherwise detained on the 30th Sept., 1886	99
Found guilty and sentenced	6490
Escaped before trial	1
Total number of commitments	10645

The places of confinement to which the 6490 convicted persons were sentenced are set forth in the following statement, and similar information is given as regards the sentenced prisoners of the previous year :—

	1885.	1886.
Sentenced to the Kingston Penitentiary	175	206
do to the Reformatory for Boys	54	71
do direct to Central Prison	498	421
do to the Common Gaols and subsequently transferred to the Central Prison	261	158
do direct to the Reformatory for Females	103	105
do to Common Gaols and subsequently transferred to the Reformatory for Females	40	22
do to the Common Gaols and there detained until expiration of sentence	6170	5507
Total	7301	6490

The most noticeable feature in this summary is the large increase in the number of prisoners sentenced to the Penitentiary at Kingston during 1886. There was an increase, also, in the number of commitments to the Reformatory for Boys; and the number of women sentenced direct to the Reformatory for Females was two more than in 1885. In all the other items there are decreases.

The summaries given below shew the nature of the offences committed by the convicted prisoners :—

1. *Crimes against the Person.*

	Total commitments for the year.	Number found guilty and sentenced.
Assault, common	501	334
Assault, felonious	186	94
Cutting and wounding, stabbing, and shooting with intent	94	33
Rape, and assault with intent	39	14
Murder	32	2
Manslaughter	6	2
Attempt at suicide	10	6
Miscellaneous	39	21
	907	506

2. *Crimes against Property.*

	Total commitments for the year.	Number found guilty and sentenced.
Arson and incendiarism	43	18
Burglary	73	34
Counterfeiting and passing counterfeit money	9	2
Destroying and injuring property	92	61
Embezzlement	26	12
Forgery	52	23
Fraud, and obtaining money and goods under false pretences	118	53
Horse, cattle and sheep stealing	77	41
Housebreaking and robbery	124	89
Larceny	1396	875
Receiving stolen goods	47	14
Trespass	195	150
Miscellaneous	62	37
	2314	1409

3. *Crimes against Public Morals and Decency.*

Bigamy	13	4
Inmates and frequenters of houses of ill-fame	181	80
Keeping houses of ill-fame	71	38
Perjury	5	..
Seduction	..	..
Indecent assault and exposure	48	35
Miscellaneous	28	14
	346	171

4. *Offences against Public Order and Peace.*

Abusive and obscene language	50	35
Breaches of peace, breaches of by-laws, escapes from and obstructing constables	136	103
Carrying unlawful weapons	38	27
Deserting employment	4	3
Drunk and disorderly	3555	2597
Selling liquor without a license, and selling or giving it to Indians	106	99
Threatening and seditious language	52	21
Vagrancy	2243	1304
Miscellaneous	166	111
	6350	4300
	9917	6386
Contempt of Court	113	104
Total	10030	6490

The number of convictions is equal to 64.70 per cent. of the commitments, which is about the usual proportion. In 1885 it was 67.45 per cent., and in 1884 63.87 per cent.

The following tables shew the periods of sentence passed on the convicted prisoners, and the sex, nationalities, religious denominations, social conditions, habits, etc., of the total number of prisoners committed:—

Periods of Sentence.

	1885.	1886.
For periods under thirty days	2974	2360
For thirty days, and up to sixty days, or two months, not including the last term	2160	2104
For sixty days, or two months	550	562
Over two months to three months	379	325
Over three months to four months	200	142
Over four months to five months	79	53
Over five months to six months	448	415
Over six months to nine months	63	80
Over nine months and up to one year inclusive	105	82
Over one year and up to two years	110	89
Over two years and up to three years in the Penitentiary	109	113
Over three years in the Penitentiary	66	91
For periods of any length in the Reformatory for Boys	54	71
Sentenced to death	1	1
Sentenced to imprisonment with corporal punishment	3	..
	7301	6490

Sex.

Male	9869	9174
Female	1557	1471
	11426	10645

Nationalities.

Born in Canada	5172	4995
Born in England	1950	1839
Born in Ireland	2609	2226
Born in Scotland	582	565
Born in the United States	789	736
Born in other Countries	324	284
	11426	10645

Religious Denominations.

Roman Catholic	4286	3844
Church of England	3558	3461
Presbyterian	1468	1311
Methodist	1416	1371
Other Denominations	698	658
	11426	10645

Social Conditions.

	1885.	1886.
Married	3929	3709
Unmarried	7497	6936
	11426	10645

Habits.

Temperate	3315	3246
Intemperate	8111	7399
	11426	10645

Educational Status.

Could read and write	8821	8415
Could neither read nor write	2605	2230
	11426	10645

The number of prisoners confined in the various custodial institutions of the Province at the close of the past official year, and of the year preceding, is exhibited in the following summary:—

	1885.	1886.
In the Common Gaols	623	566
In the Central Prison, Toronto	360	287
In the Reformatory for Boys, Penetanguishene	220	205
In the Reformatory for Females, Toronto	149	130
In the Dominion Penitentiary, Kingston	525	578
	1877	1766

Gaol Expenditures.

The usual table is appended shewing the cost of maintaining the common gaols during the past and eight preceding years, under the headings of rations, clothing, fuel, salaries and wages, and repairs:—

YEAR.	Total number of prisoners in custody each year.	Cost of rations, clothing, fuel, etc., each year.	Cost of salaries and wages of gaol officials each year.	Cost of repairs.	Total gaol expenditure.
		$ c.	$ c.	$ c.	$ c.
1878	12,030	60,217 83	63,591 11	7,307 06	131,116 60
1879	11,220	58,856 24	63,914 40	5,583 44	122,354 08
1880	11,300	49,037 14	64,084 34	3,504 96	116,626 44
1881	9,229	45,001 05	63,502 00	3,410 12	111,915 15
1882	9,620	44,768 92	63,794 30	4,665 53	113,228 75
1883	9,880	44,783 50	64,935 96	4,706 20	114,425 66
1884	12,081	51,909 89	68,446 88	7,125 50	127,482 27
1885	11,426	54,321 35	70,344 96	5,081 55	129,747 86
1886	10,645	53,300 43	71,690 76	8,753 07	133,744 26

Construction and Alteration of Gaol Buildings.

The most important work coming under this head is the construction of a new Gaol and Court House in Stratford. The old gaol had been condemned in no measured terms by the past and present Inspectors, and their urgent recommendations at last took effect. In the early part of 1885 plans were prepared and a site selected, both receiving the approval of the Inspector having supervision of the Stratford Gaol. Work was commenced in July, 1885, and has been steadily going on ever since. It is expected that the gaol will be ready for occupation in June next.

It contains six distinct corridors, with five cells in each, as well as the necessary domestic offices of kitchen, laundry, bath-room, etc. There are also commodious quarters for the gaoler, matron and turnkey. The gaol is to be heated and ventilated on the most approved modern systems, and it is provided with three good sized yards. The cost of the gaol and yard walls will be about $30,000.

The architect was Mr. Geo. F. Durand, of London, and the contractors Messrs. Scrimgeour Bros., of Stratford.

To the St. Thomas Gaol an addition has been at last made, containing kitchen, store-room, laundry and turnkey's quarters.

An addition has also been made to the gaol at Port Arthur, in the Thunder Bay District. It is of substantial character, two storeys in height, and contains cells for twenty males and four females.

A separate house for the gaoler has been built at Sault Ste Marie, thus removing the gaoler from the very unsuitable quarters he had before occupied in the gaol, and leaving that portion of the building available for store-rooms, etc.

A new lock-up has been opened at Fort William, and also one at Maganetawan, and another is in the course of erection at Burke's Falls.

In several of the county gaols repairs have been made, and all are now in a fairly good condition.

Escapes.

The escapes during the past year numbered seventeen, but in nine cases the prisoners were recaptured. In the majority of these instances, the escapes were the result of some slight oversight or lack of caution on the part of the gaol officials, such as the leaving of a prisoner alone in a yard, the omission to lock some inside door, but in no case was there evidence of criminal neglect or complicity by the officials.

Deaths.

The number of prisoners who died in the various gaols was thirty-nine. An inquest was held in each case. Most of the prisoners who died were old and infirm paupers, committed to gaol because they were homeless and friendless, or, in some instances, because there was no hospital in the district to which admission could be procured.

Statistical Tables.

Following this portion of the report will be found the tables named in the list given hereunder:—

Table No. 2, shewing the total number of prisoners in the several gaols on the 30th September, 1886, and the nature of their imprisonment.

Table No. 3, shewing the number of prisoners over and under 16 years of age, the number of re-committals, the number of persons acquitted on being brought to trial, and the number of persons committed under civil processes.

Table No. 4, shewing the offences for which prisoners were *committed*.

Table No. 5, shewing the total number of prisoners, male and female, *committed* under each offence, during the year.

Table No. 6, shewing the number of prisoners, male and female, *sentenced* during the year, and a comparison of the same with the preceding year.

Table No. 7, shewing the number of prisoners upon whom sentence was passed, the nature and periods of the sentences, and the operation of the County Judges' Criminal Courts.

Table No. 8, shewing the offences for which prisoners were *sentenced*.

Table No. 9, shewing the total number of prisoners, male and female, *sentenced* under each offence.

Table No. 10, shewing the nationalities, religious denominations, social state, etc., of the prisoners committed.

Table No. 11, shewing the occupations, trades, or callings of the prisoners committed during the year.

Table No. 12, shewing the number of escapes and deaths, the revenue derived from prison labour, the cost of diet, the accommodation of the gaols, and the highest and lowest number of prisoners in custody in each gaol during the year.

Table No. 13, shewing how the prisoners committed during the year were maintained, the cost thereof, and the salaries of officials.

Table No. 14, shewing the daily cost per prisoner in each of the gaols of the Province, for the year ending 30th September, 1886.

Following these tables are the separate reports upon each of the Common Gaols:—

TABLE No. 2.

Shewing the total number of prisoners who were in the several gaols of the Province on the evening of 30th September, 1886, and the nature of their imprisonment.

NAME OF GAOL.	Classification.				Nature of Imprisonment.						Total number of persons who remained in custody on 30th September, 1886.
	Men.	Women.	Boys under 16 years.	Girls under 16 years.	Waiting trial.	Under sentence for periods of two months and under.	Under sentence for periods over two months.	In default of sureties to keep the peace.	Insane, idiotic or imbecile persons.	Otherwise detained.	
Barrie	16	5			3	1	9		7	1	21
Berlin	1					1					1
Belleville	11	6			3	9	3		2		17
Brantford	9	1				8		1		1	10
Brampton	4	1	1		1		2		3		6
Brockville	11	3			1	3	8		2		14
Cayuga	7				4	1			2		7
Cornwall	4				3		1				4
Cobourg	8	3			5		2		4		11
Chatham	4	1			2	2	1				5
Goderich	5	1			1		2		3		6
Guelph	6	3			2		2		2	3	9
Hamilton	29	10			12	19	6		2		39
Kingston	15	5	1		4	5	9		3		21
London	17	9	1		6	9	4	2	5	1	27
Lindsay	7	1			2				4	2	8
L'Orignal		3			1				2		3
Milton	3	1	2		2	1	2		1		6
Napanee	3					1	2				3
Ottawa	18	11	1		16	8	3		3		30
Owen Sound	13	6	1		4	5	9	1	1		20
Orangeville	11				1	10					11
Perth	9	2			2	6			2	1	11
Picton	1					1					1
Pembroke	6	4	1				9		1	1	11
Peterboro'	12				1	4	2	1	4		12
Port Arthur	4						3			1	4
Rat Portage	4					2	2				4
Simcoe	4		1	1	2				2	2	6
St. Catharines	6	1				3	3		1		7
Sarnia	11	3			3	3	3		3		14
Stratford	5					2	3				5
Sandwich	11	4	1		5	3	1	1	4		16
St. Thomas	4	2			1*	2			3		6
Sault Ste. Marie	2						1		1		2
Toronto	101	55	1		10	105	15	2	24	1	157
Walkerton	2	1	1			1	2		1		4
Woodstock	8	2				6	1	1	1	1	10
Welland	9	2	1		3	5	3		1	1	12
Whitby	3	1				2	1		1		4
Lock-ups											
Bracebridge											
Gore Bay											
Little Current											
Manitowaning											
Mattawa	1						1				1
Parry Sound											
Silver Islet											
Minden											
Haliburton											
Sudbury											
Huntsville											
Fort William											
Totals	405	147	13	1	100	232	114	9	95	16	566

TABLE

Shewing the number of persons *committed*, the number over and under 16 the peace, number of unsound mind, number acquitted on number sentenced, and number *com-*

NAME OF GAOL.	TOTAL NUMBER COMMITTED DURING THE YEAR.			NUMBER UNDER 16 YEARS OF AGE.			NUMBER OVER 16 YEARS OF AGE.			For the first time.	For the second time.	For the third time.
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.			
Barrie	207	29	236	5	3	8	202	26	228	217	16	2
Berlin	62	3	65	6	.....	6	56	3	59	42	14	6
Belleville	155	31	186	5	.....	5	150	31	181	161	17	3
Brantford	201	32	233	13	2	15	188	30	218	139	34	7
Brampton	242	5	247	1	.....	1	241	5	246	186	37	8
Brockville	141	19	160	6	.....	6	135	19	154	78	32	20
Cayuga	113	12	125	3	.....	3	110	12	122	90	7	11
Cornwall	44	6	50	1	.....	1	43	6	49	38	7	1
Cobourg	88	8	96	1	.....	1	87	8	95	64	9	11
Chatham	91	12	103	.....	.....	.....	91	12	103	96	7	.....
Goderich	52	10	62	4	.....	4	48	10	58	44	5	3
Guelph	82	5	87	1	.....	1	81	5	86	68	12	3
Hamilton	816	137	953	37	3	40	779	134	913	470	138	65
Kingston	133	24	157	5	.....	5	128	24	152	141	15	1
London	703	98	801	26	4	30	677	94	771	407	188	69
Lindsay	52	2	54	1	.....	1	51	2	53	50	3	.....
L'Orignal	14	6	20	.....	.....	.....	14	6	20	16	4	.....
Milton	368	5	373	3	.....	3	365	5	370	303	47	15
Napanee	43	5	48	1	.....	1	42	5	47	36	3	9
Ottawa	613	99	712	23	2	25	590	97	687	627	54	17
Owen Sound	178	22	200	11	2	13	167	20	187	140	36	18
Orangeville	47	10	57	6	.....	6	41	10	51	27	11	5
Perth	69	13	82	.....	.....	.....	69	13	82	62	6	1
Picton	76	4	80	.....	.....	.....	76	4	80	43	10	6
Pembroke	60	12	72	5	.....	5	55	12	67	45	9	7
Peterboro'	103	3	106	5	1	6	98	2	100	82	14	3
Port Arthur	108	12	120	.....	2	2	108	10	118	109	8	3
Rat Portage	87	17	104	1	.....	1	86	17	103	74	6	8
Simcoe	86	9	95	7	1	8	79	8	87	78	12	1
St. Catharines	111	6	117	8	.....	8	103	6	109	108	7	1
Sarnia	265	13	278	8	2	10	257	11	268	274	2	.....
Stratford	136	12	148	1	.....	1	135	12	147	92	26	3
Sandwich	148	25	173	1	2	3	147	23	170	125	24	9
St. Thomas	113	13	126	5	1	6	108	12	120	78	27	8
Sault Ste. Marie	33	2	35	.....	.....	.....	33	2	35	33	2	.....
Toronto	2499	701	3200	119	7	126	2380	694	3074	2717	298	93
Walkerton	76	12	88	8	3	11	68	9	77	76	9	1
Woodstock	287	9	296	11	.....	11	276	9	285	185	61	15
Welland	240	5	245	1	.....	1	239	5	244	158	39	19
Whitby	65	5	70	3	1	4	62	4	66	53	11	1
Lock-ups –												
Bracebridge	19	1	20	1	1	2	18	.....	18	16	4	.....
Gore Bay	3	.....	3	.....	.....	.....	3	.....	3	2	1	.....
Little Current	8	.....	8	2	.....	2	6	.....	6	6	2	.....
Manitowaning	18	.....	18	.....	.....	.....	18	.....	18	15	1	2
Mattawa	36	7	43	.....	1	1	36	6	42	40	3	.....
Parry Sound	13	1	14	.....	.....	.....	13	1	14	12	1	1
Silver Islet	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Minden	4	.....	4	.....	.....	.....	4	.....	4	4	.....	.....
Huntsville	2	.....	2	.....	.....	.....	2	.....	2	2	.....	.....
Sudbury	6	1	7	.....	.....	.....	7	.....	7	7	.....	.....
Fort William	58	8	66	7	.....	7	59	.....	59	59	5	2
Totals	9174	1471	10645	352	38	390	8831	1424	10255	7995	1284	458

No. 3.

years of age, the number of recommittals, the number for want of securities to keep
trial, number discharged without trial, number waiting trial,
mitted under civil process.

For more than the third time.	For want of sureties to keep the peace.	Witnesses.	Lunacies and idiots.	Fraudulent debtors.	Under civil process.	Acquitted on trial and discharged.	Discharged without trial.	Died before trial.	Waiting trial.	Sentenced for any period.	Escaped before trial.	NAME OF GAOL.
1	1	.....	41	2	.....	55	11	.....	3	123	.....	Barrie.
3	1	1	1	1	1	20	4	.....	.....	36	.....	Berlin.
5	2	.....	16	.....	.....	38	3	1	3	123	.....	Belleville.
53	1	.....	5	4	1	51	13	.....	.....	158	.....	Brantford.
16	1	.....	3	3	.....	212	.....	.....	1	27	.....	Brampton.
30	3	1	13	.....	.....	30	.....	.....	1	112	.....	Brockville.
17	.....	.....	6	.....	.....	9	.....	.....	.....	110	.....	Cayuga.
4	1	.....	10	.....	.....	8	3	.....	3	25	.....	Cornwall.
12	2	.....	12	.....	.....	5	14	.....	5	58	.....	Cobourg.
.....	1	.....	7	.....	.....	15	5	.....	2	73	.....	Chatham.
10	1	.....	10	.....	.....	9	.....	.....	1	41	.....	Goderich.
4	.....	1	10	.....	2	5	32	.....	3	34	.....	Guelph.
280	17	1	16	.....	.....	11	164	.....	14	730	.....	Hamilton.
.....	2	.....	8	.....	.....	10	24	.....	4	109	.....	Kingston.
137	15	.....	25	6	.....	249	53	.....	6	447	.....	London.
1	2	.....	5	2	.....	5	.....	.....	2	38	.....	Lindsay.
.....	.....	.....	7	1	.....	3	1	.....	1	7	.....	L'Orignal.
8	.....	.....	6	.....	.....	6	320	.....	2	39	.....	Milton.
.....	.....	.....	10	.....	.....	3	.....	.....	.....	35	.....	Nepanee.
14	.....	.....	21	.....	.....	247	12	.....	16	416	.....	Ottawa.
6	6	2	9	1	.....	67	4	.....	4	107	.....	Owen Sound.
14	.....	.....	4	.....	.....	9	.....	.....	.....	44	.....	Orangeville.
13	.....	.....	14	.....	.....	3	6	.....	.....	59	.....	Perth.
21	.....	.....	4	.....	.....	1	59	.....	.....	16	.....	Picton.
11	1	.....	12	1	.....	6	14	.....	.....	38	.....	Pembroke.
7	2	1	4	.....	.....	3	.....	.....	1	95	.....	Peterboro'.
.....	1	3	2	.....	.....	14	2	.....	.....	98	.....	Port Arthur.
16	.....	.....	1	.....	.....	20	.....	.....	.....	83	.....	Rat Portage.
4	1	1	5	.....	2	18	30	.....	2	36	.....	Simcoe.
1	2	.....	12	.....	.....	4	20	.....	.....	79	.....	St. Catharines.
2	1	2	8	5	1	52	1	.....	3	206	.....	Sarnia.
27	1	.....	9	1	.....	6	43	1	.....	86	1	Stratford.
15	1	.....	14	.....	.....	20	7	.....	5	126	.....	Sandwich.
13	.....	.....	11	7	.....	16	5	.....	.....	87	.....	St. Thomas.
.....	.....	2	4	.....	.....	5	3	.....	2	19	.....	Sault Ste. Marie.
92	14	3	86	11	.....	1012	36	1	10	2027	.....	Toronto.
2	2	.....	7	.....	2	12	1	.....	2	62	.....	Walkerton.
35	3	.....	8	5	.....	11	158	.....	.....	111	.....	Woodstock.
29	.....	.....	5	.....	.....	5	60	.....	3	172	.....	Welland.
5	3	.....	9	3	1	6	7	.....	.....	41	.....	Whitby.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	[illegible]
.....	.....	.....	3	.....	.....	.....	1	.....	.....	16	.....	[illegible]
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	.....	Owen Sound.
.....	.....	.....	.....	.....	.....	.....	1	.....	.....	7	.....	Little Current.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	18	.....	Manitowaning.
.....	.....	.....	1	.....	7	3	.....	.....	.....	34	.....	Muskoka.
.....	1	.....	4	.....	.....	1	.....	.....	.....	8	.....	Parry Sound.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Silver Islet.
.....	.....	.....	1	.....	.....	1	.....	.....	.....	2	.....	Minden.
.....	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	Haliburton.
.....	1	.....	1	.....	.....	1	.....	.....	.....	4	.....	Sudbury.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	66	.....	Fort William.
908	90	18	470	93	17	2285	1119	3	99	6490	1	Totals.

TABLE

Shewing the offences for which prisoners were *committed*

NAME OF GAOL.	Abortion.	Abusive and obscene language.	Arson.	Assault.	Assault, felonious.	Attempted suicide.	Abduction.	Bigamy.	Breaches of the peace.	Breaches of by-laws.	Burglary.	Carrying unlawful weapons.
Barrie	1	1	2	11	7			1			3	6
Berlin				3	1						6	
Belleville		2	6	9	4			2			2	
Brantford			1	10	13						1	
Brampton				2		1				1		
Brockville			2	1		1	1		2			1
Cayuga		2		8							2	
Cornwall				3	2					1		
Cobourg			3	3	3							1
Chatham				9						2	3	2
Goderich				4								
Guelph			2	10							5	2
Hamilton	2	3	1	99	17	1	3	3				3
Kingston			3	7	2					3	3	1
London		6		40	14				1	1	2	2
Lindsay		1		4	2	1				1	2	
L'Orignal				1								
Milton			1	3					1		1	
Napanee		1		2								
Ottawa		11		46	4	1			49		3	
Owen Sound			3	10	6				2			2
Orangeville				3	3	1						
Perth				4	3							
Picton			5								2	
Pembroke					1						1	1
Peterboro'		3		12				4	1			
Port Arthur				5	1				2			
Rat Portage				7					3			1
Simcoe			1	8							1	
St. Catharines		1		10	4	1	1					
Sarnia			1	8	2							
Stratford		1		5	6						2	
Sandwich		3		10	4				2	1	3	2
St. Thomas		1		4							1	2
Sault Ste. Marie					1				2			
Toronto	5	8	8	98	77	3		1		12	18	12
Walkerton			1	4	1						3	
Woodstock		5	2	17	1			1			8	
Welland				6	2			1			1	
Whitby	1	1		4	4							
Lock-ups :												
Bracebridge				2			1			3		
Gore Bay				1								
Little Current				2								
Manitowaning												
Mattawa				2								
Parry Sound			1	2								
Minden												
Sudbury				2	1				1			
Huntsville												
Fort William												
Totals	9	50	43	501	186	10	6	13	66	25	73	38

No. 4.

during the year ended 30th September, 1886.

Contempt of court.	Counterfeiting and passing counterfeit money.	Cruelty to animals.	Cutting and wounding and attempting same.	Debtors.	Deserting employment.	Destroying and injuring property.	Detained as witnesses.	Drunk and disorderly.	Embezzlement.	Escaping from and obstructing constable.	Escaping from prison.	Forgery.	Fraud and obtaining money under false pretences.	NAME OF GAOL.
10	1	....	1	2	....	1	....	35	....	....	....	3	4	Barrie.
....	....	1	2	1	....	2	1	4	2	....	....	1	2	Berlin.
1	....	1	....	....	....	1	....	34	1	....	....	2	2	Belleville.
1	....	....	2	4	....	....	....	91	....	....	2	2	2	Brantford.
3	....	....	....	....	....	....	....	10	....	....	....	....	....	Brampton.
2	....	....	1	....	....	....	1	36	1	....	....	2	....	Brockville.
2	....	....	....	....	....	1	....	15	1	....	....	....	....	Cayuga.
3	....	....	....	....	....	....	....	1	....	....	....	....	....	Cornwall.
2	....	....	....	....	....	5	....	15	....	....	....	3	4	Cobourg.
8	....	....	....	....	....	....	....	14	....	....	....	1	3	Chatham.
4	....	....	....	....	....	....	....	4	....	....	....	1	1	Goderich.
....	....	....	....	....	....	1	1	12	2	....	....	....	6	Guelph.
1	1	3	4	1	....	18	1	385	2	....	....	4	7	Hamilton.
....	....	....	....	1	....	1	....	58	....	....	5	1	2	Kingston.
5	....	2	....	6	....	11	....	338	1	11	....	....	8	London.
....	....	....	....	2	....	....	....	1	....	....	....	1	1	Lindsay.
....	....	....	....	1	....	1	....	1	....	....	....	....	....	L'Orignal.
1	....	....	....	....	....	1	....	13	....	1	....	....	1	Milton.
3	....	1	....	....	1	....	....	3	....	....	....	....	1	Napanee.
15	....	1	12	....	1	18	....	280	....	4	....	1	4	Ottawa.
4	1	....	....	1	....	2	3	29	....	....	....	2	14	Owen Sound.
....	....	....	....	....	....	....	....	3	....	1	....	....	....	Orangeville.
3	....	....	....	....	....	....	1	4	....	....	....	....	1	Perth.
....	....	....	....	....	....	2	....	54	....	....	....	....	....	Picton.
....	....	1	....	1	....	1	....	2	....	1	....	....	4	Pembroke.
1	2	....	1	....	....	2	1	13	....	....	....	....	....	Peterboro'.
....	....	....	....	....	....	....	3	30	....	....	1	....	....	Porth Arthur.
....	....	....	....	....	....	2	....	53	....	2	....	....	1	Rat Portage.
8	....	1	....	....	....	....	1	6	....	....	....	....	3	Simcoe.
1	2	....	....	....	....	....	....	21	....	1	....	1	3	St. Catharines.
2	....	....	....	5	....	1	2	72	....	....	....	2	2	Sarnia.
10	1	....	....	1	....	1	....	15	2	....	....	1	2	Stratford.
4	....	....	....	....	....	....	....	31	2	....	2	6	7	Sandwich.
5	1	....	....	2	....	....	....	30	....	....	....	1	1	St. Thomas.
....	....	....	....	....	....	2	2	1	....	....	....	....	1	Sault Ste. Marie.
6	....	3	34	11	2	10	3	1705	12	8	3	12	19	Toronto.
3	....	....	....	....	....	1	....	2	....	....	....	1	3	Walkerton.
....	....	1	....	5	....	....	....	28	....	....	....	2	6	Whitby.
4	....	....	....	....	....	4	....	40	....	3	....	....	1	W. Bend.
1	....	....	....	3	....	....	....	....	....	....	....	....	....	Whitby.
....	....	....	....	....	....	....	....	....	....	....	....	....	....	[illegible]
....	....	....	....	....	....	....	....	7	....	....	....	1	....	[illegible]
....	....	....	....	....	....	....	....	....	....	....	....	....	....	[illegible]
....	....	....	....	....	....	....	....	3	....	....	....	....	....	Little Current.
....	....	....	....	....	....	....	....	13	....	....	....	....	....	Manitowaning.
....	....	....	....	....	....	....	....	13	....	....	....	....	....	[illegible]
1	....	....	....	....	....	....	....	....	....	....	....	....	....	Parry Sound.
....	....	....	....	....	....	....	....	....	....	....	....	1	....	Minden.
....	....	....	....	....	....	....	....	2	....	....	....	....	....	Sudbury.
....	....	....	....	....	....	....	....	1	....	....	....	....	....	Huntsville.
....	....	....	....	....	....	3	....	36	....	....	....	....	2	Fort William.
113	9	15	57	47	4	92	29	3535	26	32	13	52	118	

TABLE

Shewing the offences for which prisoners were *committed*

NAME OF GAOL.	Gambling.	Giving liquor to Indians.	Horse, cattle or sheep stealing.	Housebreaking and robbery.	Indecent assault and exposure.	Inmates and frequenters of houses of ill-fame.	Keeping houses of ill-fame.	Larceny.	Lunatics and persons who were unsafe to be at large.	Manslaughter.	Misdemeanor.	Murder.	Perjury.
Barrie	....	....	8	5	2	.....	.....	22	40	.....	.....	1	.....
Berlin	....	....	....	2	....	.....	.....	14	1	.....	.....	1	.....
Belleville	....	1	4	3	4	1	.....	26	16	.....	3	.....	.....
Brantford	....	7	3	2	2	.....	.....	42	5	.....	.....	1	.....
Brampton	....	....	1	....	....	.....	.....	7	3	.....	.....	.....	.....
Brockville	....	....	1	2	1	.....	.....	23	13	.....	.....	1	.....
Cayuga	....	....	....	....	1	2	.....	13	6	.....	3	.....	.....
Cornwall	....	....	....	....	....	.....	.....	21	10	.....	.....	1	.....
Cobourg	....	....	....	....	....	.....	.....	20	12	.....	7	.....	.....
Chatham	....	1	10	....	1	1	2	21	7	.....	2	.....	.....
Goderich	....	....	1	1	....	.....	.....	12	10	.....	.....	.....	.....
Guelph	....	....	2	....	1	.....	.....	15	10	.....	2	.....	.....
Hamilton	....	....	....	16	1	1	1	97	19	.....	.....	1	.....
Kingston	....	....	....	....	....	1	1	25	7	.....	.....	.....	.....
London	....	1	4	8	3	10	8	104	25	.....	6	3	.....
Lindsay	....	....	....	....	....	.....	.....	8	5	.....	.....	.....	.....
L'Orignal	....	....	2	....	....	.....	.....	3	7	.....	.....	2	.....
Milton	....	....	2	....	3	.....	.....	8	7	.....	.....	.....	.....
Napanee	....	....	....	....	....	.....	1	5	10	.....	.....	.....	.....
Ottawa	....	....	....	14	1	17	8	125	21	2	.....	.....	.....
Owen Sound	....	....	1	1	....	3	2	30	9	.....	.....	4	.....
Orangeville	....	....	....	....	....	.....	.....	1	4	.....	.....	.....	1
Perth	....	....	....	....	....	.....	.....	11	14	1	.....	.....	.....
Picton	....	....	....	....	....	.....	.....	5	4	.....	.....	.....	.....
Pembroke	....	....	....	....	1	1	1	8	10	.....	.....	5	.....
Peterboro'	....	....	....	....	....	.....	.....	11	4	.....	.....	.....	.....
Port Arthur	....	1	2	1	....	2	2	23	2	.....	2	2	.....
Rat Portage	1	....	....	2	1	8	5	13	1	.....	.....	.....	.....
Simcoe	....	....	....	2	....	.....	.....	16	5	.....	4	1	.....
St. Catharines	....	....	3	1	....	.....	.....	38	12	.....	.....	1	.....
Sarnia	....	....	3	9	....	3	2	37	8	.....	.....	.....	.....
Stratford	....	....	4	....	3	.....	.....	17	9	.....	.....	.....	.....
Sandwich	3	....	3	6	1	.....	.....	31	13	.....	.....	2	1
St. Thomas	....	1	8	....	....	.....	.....	22	11	.....	1	.....	.....
Sault Ste. Marie	....	3	....	....	....	.....	1	6	4	1	1	1	.....
Toronto	....	....	8	33	10	99	32	431	86	2	2	4	1
Walkerton	....	....	1	10	2	1	1	11	7	.....	....	.....	.....
Woodstock	....	....	....	....	4	.....	.....	21	8	.....	6	.....	.....
Welland	....	....	6	3	3	.....	.....	25	5	.....	.....	1	2
Whitby	....	....	....	....	1	.....	.....	20	9	.....	.....	.....	.....
Lock-ups—													
Bracebridge	....	....	....	....	....	.....	.....	.....	3	.....	.....	.....	.....
Gore Bay	....	....	....	....	....	.....	.....	.....	.....	.....	.....	.....	.....
Little Current	....	....	....	....	....	.....	.....	2	....	.....	.....	.....	.....
Manitowaning	....	1	....	....	....	.....	.....	.....	1	.....	.....	.....	.....
Mattawa	....	....	....	....	2	9	3	5	1	.....	.....	.....	.....
Parry Sound	....	....	....	....	....	.....	.....	.....	4	.....	.....	.....	.....
Minden	....	....	....	....	....	.....	.....	.....	1	.....	.....	.....	.....
Sudbury	....	....	....	....	....	.....	.....	.....	1	.....	.....	.....	.....
Huntsville	....	....	....	....	....	.....	.....	.....	.....	.....	1	.....	.....
Fort William	....	3	....	3	....	3	1	1	.....	.....	.....	.....	.....
Totals	4	19	77	124	48	162	71	1396	470	6	40	32	5

No. 4.—*Continued.*

during the year ended 30th September, 1886.

Prostitution.	Rape and assault with intent.	Receiving stolen goods.	Seduction.	Selling liquor without license.	Shooting with intent.	Stabbing.	Threatening and seditious language.	Trespass.	Unlawful shooting.	Vagrancy.	Want of sureties to keep the peace.	Other offences not enumerated.	Total.	NAME OF GAOL.
....	4	1	....	5	2	....	.....	.....	....	48	1	8	236	Barrie.
....	....	....	....	....	....	....	....	....	....	16	1	4	65	Berlin.
....	2	5	....	....	....	....	2	5	....	41	2	4	186	Belleville.
1	1	....	....	1	....	2	....	1	....	29	1	6	233	Brantford.
....	....	....	....	....	....	....	2	....	....	216	1	....	247	Brampton.
4	2	....	....	....	....	....	1	....	....	31	3	27	160	Brockville.
1	....	....	....	....	....	....	1	1	....	66	....	....	125	Cayuga.
....	2	....	....	3	1	1	....	....	....	....	1	1	50	Cornwall.
....	....	....	....	....	....	1	....	1	....	13	2	1	96	Cobourg.
1	....	2	....	....	1	....	....	1	1	9	1	....	103	Chatham.
....	1	....	....	....	....	1	1	....	....	18	.....	3	62	Goderich.
....	1	2	....	1	1	....	....	1	....	8	.....	2	87	Guelph.
....	2	1	....	1	....	....	17	51	....	143	10	33	953	Hamilton.
....	....	....	....	....	....	....	3	1	....	30	....	2	157	Kingston.
4	....	4	....	....	2	2	4	14	....	130	15	6	891	London.
....	1	....	....	1	....	....	....	....	....	20	2	1	54	Lindsay.
....	....	....	....	....	....	1	1	....	....	....	....	....	20	L'Orignal.
....	2	....	....	3	....	....	1	....	....	324	....	....	373	Milton.
1	....	1	....	....	....	....	....	....	....	13	....	5	48	Napanee.
....	3	3	....	1	2	....	1	....	2	44	.....	18	712	Ottawa.
....	....	....	....	2	....	....	....	2	....	68	6	2	200	Owen Sound.
....	....	....	....	3	....	....	....	....	....	35	....	2	57	Orangeville.
....	....	....	....	....	....	....	....	....	....	40	....	....	82	Perth.
....	....	....	....	....	....	....	....	....	....	7	.....	1	80	Picton.
....	1	....	....	12	....	....	....	....	....	18	1	1	72	Pembroke.
1	....	....	....	4	1	....	1	....	....	37	2	5	196	Peterboro'.
....	....	2	....	18	1	....	3	....	....	17	....	....	120	Port Arthur.
....	....	....	....	....	....	....	2	....	....	2	....	....	104	Rat Portage.
....	1	....	....	....	....	1	....	6	....	10	1	19	95	Simcoe.
....	....	1	....	....	....	....	....	....	....	7	2	6	117	St. Catharines.
....	....	....	....	3	2	....	....	6	....	102	2	4	278	Sarnia.
....	1	2	....	1	1	....	....	4	....	53	.....	6	148	Stratford.
1	1	1	....	....	3	....	....	6	....	19	1	4	173	Sandwich.
....	....	1	....	3	....	....	1	21	....	6	....	3	126	St. Thomas.
....	1	....	....	3	....	....	....	....	....	6	....	....	35	Sault Ste. Marie.
....	3	18	....	15	4	....	9	59	....	295	14	5	3200	Toronto.
....	6	....	....	....	1	....	....	3	....	17	2	7	88	Walkerton.
....	....	....	....	2	....	....	1	3	....	172	3	....	296	Woodstock.
....	....	2	....	....	2	....	....	9	....	114	....	11	246	Welland.
....	....	1	....	....	....	....	1	....	....	12	3	9	70	Whitby.
														Lock-ups—
....	1	....	....	....	....	....	....	....	....	1	....	1	20	Bracebridge.
....	....	....	....	....	....	....	....	....	....	2	....	....	3	Gore Bay.
....	....	....	....	....	1	....	....	....	....	....	....	....	8	Little Current.
....	....	....	....	....	....	....	....	....	....	....	....	3	18	Manitowaning.
5	1	....	....	2	....	....	....	....	....	....	....	....	43	Mattawa.
....	2	....	....	3	....	....	....	....	....	....	1	....	14	Parry Sound.
....	....	....	....	....	....	....	....	....	....	2	....	....	4	Minden.
....	....	....	....	....	....	....	....	....	....	....	....	....	7	Sudbury.
....	....	....	....	....	....	....	....	....	....	....	....	....	2	Huntsville.
....	....	....	....	....	....	....	....	....	....	3	....	11	66	Fort William.
19	39	47	...	87	25	9	52	195	3	2243	78	221	10645	Totals.

TABLE No. 5.

Shewing the total number of prisoners, male and female, *committed* under each offence during the year.

OFFENCES.	Male.	Female.	Total.
Abortion	5	4	9
Abusive and obscene language	41	9	50
Arson	39	4	43
Assault	476	25	501
Assault, felonious	178	8	186
Attempted suicide	9	1	10
Abduction	5	1	6
Bigamy	13	.....	13
Breaches of the peace	65	1	66
Breaches of by-law	19	6	25
Burglary	73	.....	73
Carrying unlawful weapons	38	.....	38
Contempt of court	106	7	113
Counterfeiting and passing counterfeit money	9	.....	9
Cruelty to animals	15	.....	15
Cutting and wounding, and attempting same	54	3	57
Debtors	41	6	47
Deserting employment	4	.....	4
Destroying and injuring property	87	5	92
Detained as witnesses	16	4	20
Drunk and disorderly	2989	566	3555
Embezzlement	26	.....	26
Escaping from or obstructing constables	32	.....	32
Escaping from prisons	13	.....	13
Forgery	52	.....	52
Fraud and obtaining money under false pretences	114	4	118
Gambling	4	.....	4
Giving liquor to Indians	18	1	19
Horse, cattle, or sheep stealing	77	.....	77

TABLE No. 5.—*Continued.*

Shewing the total number of prisoners, male and female, *committed* under each offence during the year.

OFFENCES.	Male.	Female.	Total.
Housebreaking and robbery	123	1	124
Incendiarism			
Indecent assault and exposure	46	2	48
Inmates and frequenters of houses of ill-fame	68	94	162
Keeping houses of ill-fame	23	48	71
Larceny	1288	108	1396
Lunatics and persons who were unsafe to be at large	314	156	470
Manslaughter	4	2	6
Misdemeanor	40		40
Murder	28	4	32
Perjury	4	1	5
Prostitution	5	14	19
Rape and assault with intent	39		39
Refusing bail			
Receiving stolen goods	32	15	47
Seduction			
Selling liquor without license	79	[illegible]	[illegible]
Shooting with intent	25		25
Sodomy	7	2	9
Threatening and seditious language	46	7	53
Treason	187	8	195
Unlawful shooting	3		3
Vagrancy	[illegible]	[illegible]	[illegible]
Want of sureties to keep the peace	73	5	78
Other offences not enumerated	[illegible]	31	221
Totals	9374	1471	10845

TABLE No. 6.

Shewing the number of prisoners, male and female, *sentenced* during the year ended 30th September, 1886, and a comparison of the same with the previous year.

NAME OF GAOL.	No. of prisoners *sentenced* in the year ended 30th September, 1886.			No. of prisoners *sentenced* in the year ended 30th September, 1885.			Increase.			Decrease.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Barrie	107	16	123	184	21	205	...	...	...	77	5	82
Berlin	33	3	36	43	2	45	...	1	1	10	...	10
Belleville	104	19	123	103	20	123	1	...	1	...	1	1
Brantford	139	19	158	100	12	112	39	7	46	...	...	...
Brampton	26	1	27	35	1	36	...	...	...	9	...	9
Brockville	101	11	112	154	23	177	...	...	...	53	12	65
Cayuga	101	9	110	81	9	90	20	...	20	...	...	...
Cornwall	24	1	25	16	...	16	8	1	9	...	...	...
Cobourg	55	3	58	94	5	99	...	...	...	39	2	41
Chatham	66	7	73	78	7	85	...	...	...	12	...	12
Goderich	33	8	41	29	4	33	4	4	8	...	...	...
Guelph	32	2	34	68	7	75	...	...	...	36	5	41
Hamilton	628	102	730	621	117	738	7	...	7	...	15	15
Kingston	92	17	109	103	35	138	...	...	...	11	18	29
London	396	51	447	440	66	506	...	...	...	44	15	59
Lindsay	36	2	38	41	3	44	...	...	...	5	1	6
L'Orignal	7	...	7	15	1	16	...	...	...	8	1	9
Milton	38	1	39	44	1	45	...	...	...	6	...	6
Napanee	33	2	35	40	5	45	...	...	...	7	3	10
Ottawa	370	46	416	328	65	393	42	...	42	...	19	19
Orangeville	35	9	44	45	10	55	...	...	...	10	1	11
Owen Sound	96	11	107	154	10	164	...	1	1	58	...	58
Perth	51	8	59	53	6	59	...	2	2	2	...	2
Picton	15	1	16	9	4	13	6	...	6	...	3	3
Pembroke	31	7	38	68	12	80	...	...	...	37	5	42
Peterboro'	92	3	95	99	10	109	...	...	...	7	7	14
Port Arthur	87	11	98	133	9	142	...	2	2	46	...	46

TABLE No. 6—*Continued.*

Shewing the number of prisoners, male and female, *sentenced* during the year ended 30th September, 1886, and a comparison of the same with the previous year.

NAME OF GAOL.	No. of prisoners *sentenced* in the year ended 30th September, 1886.			No. of prisoners *sentenced* in the year ended 30th September, 1885.			Increase.			Decrease.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Rat Portage	68	15	83	95	8	103	..	7	7	27		27
Simcoe	35	1	36	36	.....	36	.....	1	1	1	.	1
St. Catharines	76	3	79	56	9	65	20	..	20	....	6	6
Sarnia	193	12	205	255	4	259	.....	8	8	62	.	62
Stratford	80	6	86	78	7	85	2	.	2	....	1	1
Sandwich	108	18	126	120	26	146	.....	.....	.....	12	8	20
St. Thomas	79	8	87	139	17	156	.....	.....	.....	60	9	69
Sault Ste. Marie	18	1	19	22	.....	22	....	1	1	4	..	4
Toronto	1,568	459	2,027	1,670	498	2,168	.....	.....	.....	102	39	141
Walkerton	53	9	62	45	4	49	8	5	13	.....	.....	.....
Woodstock	106	5	111	104	6	110	2	.....	2	....	1	1
Welland	168	4	172	203	2	205	.	2	2	35	....	35
Whitby	39	2	41	60	6	66	.....	.....	.....	21	4	25
Lock-ups:												
Bracebridge	16	.....	16	99	4	103	.....	.....	.....	83	4	87
Gore Bay	3	.....	3	.....	.....	.....	3	.....	3	.....	.....	.....
Little Current	7	. .	7	11	4	15	....	.....	.....	4	4	8
Manitowaning	18	.	18	10	.....	10	8	.....	8	.....	.....	.....
Mattawa	29	5	34	27	1	28	2	4	6	.....	.....	.....
Parry Sound	8	....	8	3	....	3	5	.....	5	.....	.	.....
Silver Islet	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Minden	2	...	2	.....	.....	.....	2	.....	2	.....	.....	.....
Haliburton	...	.....	...	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sudbury	4	.....	4	3	.....	3	1	.....	1	.....	.....	.....
Huntsville	.....	.....	.....	24	2	26	.....	.....	.....	24	2	26
Fort William	58	8	66	.....	.....	.....	58	8	66	.....	.....	.....
Totals	5,564	926	6,490	6,238	1,063	7,301	238	54	292	912	191	1,103

TABLE

Shewing the number of prisoners upon whom sentences were passed, the nature
the County Judges'

NAME OF GAOL.	Total number of prisoners sentenced during the year.			WHERE SENTENCED TO.											
	Male.	Female.	Total.	To Gaol and afterwards transferred to Central Prison.	To Central Prison direct.	To Gaol and afterwards to Female Reformatory.	To Female Reformatory direct.	To Provincial Penitentiary.	To Reformatory for Boys.	Died while undergoing sentence.	To Gaol and there detained until expiration of sentence or payment of fine.	Under 30 day.	30 days and up to 60 or 2 months, not including the last term.	60 days or 2 months.	Over 2 to 3 months.
Barrie	107	16	123	7	5	1	....	8	3	3	96	36	39	21	5
Berlin	33	3	36	.....	8	....	....	2	....	....	26	8	14	1	2
Belleville	104	19	123	3	11	....	1	8	....	....	100	27	36	15	10
Brantford	139	19	158	1	5	....	3	7	3	....	139	60	50	16	4
Brampton	26	1	27	2	....	....	....	....	....	1	24	6	11	3	2
Brockville	101	11	112	9	9	....	1	8	....	1	84	55	9	5	8
Cayuga	101	9	110	2	3	....	1	1	....	1	102	67	16	12	2
Cornwall	24	1	25	.....	4	....	....	4	1	....	16	8	7	1	1
Cobourg	55	3	58	16	....	....	....	2	....	....	40	6	16	8	5
Chatham	66	7	73	2	9	2	3	4	....	....	53	26	15	9	2
Goderich	33	8	41	1	1	....	....	....	....	2	37	14	11	5	1
Guelph	32	2	34	.....	8	....	1	3	....	....	22	11	4	3	3
Hamilton	628	102	730	23	35	3	19	10	15	....	625	382	181	41	26
Kingston	92	17	109	.....	11	....	9	8	6	....	75	24	34	5	4
London	396	51	447	13	34	....	4	13	7	....	376	275	49	31	23
Lindsay	36	2	38	.....	1	....	....	....	....	....	37	12	10	9	2
L'Orignal	7	.....	7	.....	....	....	....	2	....	....	5	....	3	1	1
Milton	38	1	39	.....	1	....	....	1	1	2	34	6	12	7	6
Napanee	33	2	35	.....	1	....	....	....	....	....	34	14	5	9	1
Ottawa	370	46	416	5	25	1	5	27	....	....	353	247	64	29	5
Owen Sound	96	11	107	1	8	....	7	6	....	2	83	25	19	24	12
Orangeville	35	9	44	.....	....	....	....	....	....	3	41	6	9	14	1
Perth	51	8	59	.....	5	....	....	....	....	2	52	8	11	12	7
Picton	15	1	16	.....	....	....	....	1	....	....	15	9	3	1	1
Pembroke	31	7	38	.....	4	....	....	3	....	2	29	14	....	5	4
Peterboro'	92	3	95	.....	....	....	1	....	1	1	92	52	16	9	9
Port Arthur	87	11	98	.....	6	....	3	3	....	....	86	31	15	13	19
Rat Portage	68	15	83	2	....	....	....	....	....	....	81	58	8	4	5
Simcoe	35	1	36	.....	4	....	....	2	5	....	25	17	6	1	1
St. Catharines	76	3	79	.....	20	....	....	10	5	1	43	14	11	8	8
Sarnia	193	12	205	1	7	3	....	9	4	1	180	97	55	17	3
Stratford	80	6	86	1	4	....	....	3	1	....	77	29	19	16	12
Sandwich	108	18	126	6	18	....	4	3	....	....	95	55	22	13	9
St. Thomas	79	8	87	.....	3	....	1	5	....	....	78	30	35	9	3
Sault Ste. Marie	18	1	19	.....	....	....	....	1	....	....	18	3	2	1	10
Toronto	1568	459	2027	44	117	9	40	34	8	10	1765	392	1162	137	81
Walkerton	53	9	62	3	....	2	....	4	5	....	48	29	12	3	3
Woodstock	106	5	111	1	7	1	....	1	3	2	96	48	29	13	3
Welland	168	4	172	9	44	....	1	8	....	1	109	26	50	24	16
Whitby	39	2	41	.....	3	....	1	4	3	1	29	14	8	6	2
Lock-ups:															
Bracebridge	16	.....	16	5	....	....	....	....	....	....	11	11	.....	....	....
Gore Bay	3	.....	3	.....	....	....	....	....	....	....	3	3	.....	....	....
Little Current	7	.....	7	.....	....	....	....	1	....	....	6	....	5	1	....
Manitowaning	18	.....	18	.....	....	....	....	....	....	....	18	18	.....	....	....
Mattawa	29	5	34	.....	....	....	....	....	....	....	34	19	10	....	3
Parry Sound	8	.....	8	.....	....	....	....	....	....	....	8	2	6	....	....
Minden	2	.....	2	.....	....	....	....	....	....	....	2	....	2	....	....
Sudbury	4	.....	4	1	....	....	....	....	....	....	3	3	.....	....	....
Huntsville	.....	.....	.....	.....	....	....	....	....	....	....	.....	.....	.....	....	....
Fort William	58	8	66	.....	....	....	....	....	....	....	66	63	3	....	....
Total	5564	926	6490	158	421	22	105	206	71	36	5471	2360	2104	562	325

No. 7.

and period of such sentences and the disposal of those who elected to be tried at Criminal Court.

PERIODS OF SENTENCE.											COUNTY JUDGE'S CRIMINAL COURT.			NAME OF GAOL.
Over 3 to 4 months.	Over 4 to 5 months.	Over 5 to 6 months.	Over 6 to 9 months.	Over 9 months and up to 1 year, inclusive.	Over 1 year and up to 2.	Over 2 years and up to 3 to Penitentiary.	Over 3 years and upwards to Penitentiary.	For any period to the Reformatory for Boys.	Number of prisoners sentenced to death and executed.	Number of prisoners sentenced to death and commuted to imprisonment.	Acquitted on trial and discharged from custody.	Found guilty and sentenced.	Total number who elected to be tried.	
1	...	8	...	1	1	6	2	3	.....	.....	15	37	52	Barrie.
9	...	...	...	...	...	2	...	...	.....	.....	7	18	25	Berlin.
4	2	14	3	4	...	5	3	...	.....	.....	5	8	13	Belleville.
7	2	3	5	....	1	2	5	3	.....	.....	12	9	21	Brantford.
...	...	5	...	...	...	...	...	...	.....	.....	1	7	8	Brampton.
2	....	19	2	1	3	1	7	...	...	...	6	13	19	Brockville.
5	...	7	...	...	...	...	1	...	...	...	10	13	23	Cayuga.
....	...	...	...	...	3	1	3	1	.....	...	2	8	10	Cornwall.
2	5	9	....	4	1	2	..	...	...	.....	5	5	10	Cobourg.
...	...	9	....	5	3	4	...	...	...	...	...	7	7	Chatham.
....	...	8	1	...	1	...	...	...	...	...	8	6	14	Goderich.
1	....	3	....	3	3	2	1	...	...	...	8	9	17	Guelph.
5	5	4	20	15	26	5	5	15	...	.....	3	4	7	Hamilton.
1	2	13	2	4	6	7	1	6	...	...	3	2	5	Kingston.
7	...	28	5	7	2	5	8	7	...	.....	28	30	58	London.
1	...	3	...	1	...	...	...	...	...	...	1	...	1	Lindsay.
....	...	...	...	...	...	2	...	...	...	...	1	2	3	L'Original.
1	...	5	...	...	...	1	...	1	...	...	6	10	16	Milton.
4	1	...	1	...	...	...	...	...	...	...	1	5	6	Napanee.
1	...	22	1	10	10	13	14	..	...	....	11	8	19	Ottawa.
4	2	13	..	...	2	1	5	...	...	...	4	5	9	Owen Sound.
2	2	10	...	...	...	...	...	...	...	...	2	2	4	Orangeville.
2	1	15	3	...	...	...	...	...	...	...	3	5	8	Perth.
1	...	...	...	...	...	1	...	...	...	...	...	1	1	Picton.
2	...	...	10	...	...	2	1	...	...	...	4	3	7	Penetang.
1	...	6	...	...	1	...	...	1	...	...	1	2	3	Peterboro'.
2	...	6	6	....	3	3	....	....	.....	.....	2	3	5	Port Arthur.
...	1	1	2	1	3	...	...	...	...	...	20	83	103	Rat Portage.
3	...	...	1	...	...	2	...	5	...	...	12	11	23	Simcoe.
7	...	7	4	2	3	4	6	5	...	...	2	20	22	St. Catharines.
3	...	14	2	1	...	6	3	4	...	...	16	28	44	Cornis.
1	...	5	...	...	...	2	1	1	...	...	3	3	6	Stratford.
12	...	10	....	2	...	...	3	...	...	...	9	10	19	Sandwich.
...	...	3	1	...	1	3	2	...	...	...	2	6	8	St. Thomas.
1	...	1	...	...	...	....	1	...	...	...	2	...	2	Sault Ste. Marie.
41	29	117	10	15	10	17	17	8	...	...	14	8	22	Toronto.
...	...	4	....	1	1	4	....	5	...	...	2	18	20	Walkerton.
...	...	12	...	...	2	1	....	3	...	.....	9	13	22	Woodstock.
8	4	28	....	5	2	8	...	...	...	1	5	3	8	Welland.
1	...	2	1	...	...	3	1	3	...	...	19	...	19	Whitby.
...	5	...	...	...	...	...	...	...	...	...	...	...	...	Lock-ups:
...	...	...	...	...	...	...	...	...	...	...	...	...	...	Bracebridge.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	Gore Bay.
...	...	...	...	...	...	...	1	...	...	...	....	...	...	Lake Current.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	Massanoming.
...	1	1	...	...	...	...	...	...	...	...	...	...	...	Metawa.
....	...	...	...	...	...	...	...	...	...	...	...	...	...	Parry Sound.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	Minden.
...	...	...	...	...	1	...	...	...	...	...	...	...	...	Sudbury.
....	...	...	...	...	...	...	...	...	...	...	...	...	...	Huntsville.
....	...	...	...	...	...	...	...	...	...	...	...	...	...	Fort William.
142	53	415	80	82	89	115	91	71	..	1	274	425	699	Total.

TABLE

Shewing offences for which prisoners

NAME OF GAOL.	Abortion.	Abusive and obscene language.	Arson.	Assault.	Assault, felonious.	Attempted suicide.	Abduction.	Bigamy.	Breaches of the peace.	Breaches of by-laws.	Burglary.	Contempt of Court.	Carrying unlawful weapons.
Barrie	....	....	1	7	3	....	....	1	....	.....	1	10	2
Berlin	....	....	....	....	1	....	....	....	....	.....	....	....	.....
Belleville	....	1	2	6	1	....	....	2	....	.....	2	1	.....
Brantford	....	....	1	8	6	....	....	....	1	.....	1	1	.....
Brampton	....	....	....	1	....	1	....	....	1	.....	.....	3	.....
Brockville	....	....	....	....	....	1	....	....	2	.....	.....	2	.....
Cayuga	....	2	....	7	....	....	....	....	....	.....	2	2	.....
Cornwall	....	....	....	1	....	....	....	....	....	1	.....	2	.....
Cobourg	....	....	....	3	1	....	....	....	....	.....	.....	2	1
Chatham	....	....	....	7	....	....	....	....	....	2	3	8	2
Goderich	....	....	....	4	....	....	....	....	....	.....	.....	4	.....
Guelph	....	....	....	2	....	....	....	....	....	.....	1	.....	2
Hamilton	....	....	1	71	9	1	2	....	....	.....	.....	1	1
Kingston	....	....	1	5	....	....	....	....	....	3	1	.....	1
London	....	5	....	22	5	....	....	....	1	.....	2	5	1
Lindsay	....	1	....	4	1	1	....	....	....	1	.....	.....	.....
L'Orignal	....	....	....	1	....	....	....	....	....	.....	.....	.....	.....
Milton	....	....	....	2	....	....	....	....	....	.....	.....	1	.....
Napanee	....	1	....	2	....	....	....	....	....	.....	.....	3	.....
Ottawa	....	6	....	25	1	1	....	....	37	2	.....	14	.....
Owen Sound	....	....	2	7	5	....	....	....	....	...	.....	4	.....
Orangeville	....	....	....	3	....	....	....	....	....	.....	.....	.....	.....
Perth	....	....	....	3	1	....	....	....	....	.....	.....	3	.....
Picton	....	....	4	....	....	....	....	....	....	.....	2	....	.....
Pembroke	....	....	....	....	....	....	....	....	....	.....	.....	.....	.....
Peterboro'	....	3	....	12	....	....	....	....	....	1	.....	1	.....
Port Arthur	....	....	....	5	1	....	....	....	1	.....	.....	.....	.....
Rat Portage	....	....	....	7	....	....	....	....	1	.....	.....	.....	1
Simcoe	....	....	....	4	....	....	....	....	....	.....	.....	7	.....
St. Catharines	....	1	....	8	2	....	1	....	....	.....	.....	1	.....
Sarnia	....	....	1	6	2	....	....	....	....	.....	.....	1	.....
Stratford	....	1	....	1	4	....	....	....	....	.....	1	10	.....
Sandwich	....	3	....	9	4	....	....	....	2	1	3	4	2
St. Thomas	....	1	....	3	....	....	....	....	....	.....	1	.....	2
Sault Ste. Marie	....	....	....	....	1	....	....	....	2	.....	.....	.....	.....
Toronto	1	7	2	63	35	1	....	....	....	12	9	6	12
Walkerton	....	....	1	4	1	....	....	....	....	....	3	3	.....
Woodstock	....	2	1	7	1	....	....	....	....	.....	1	.....	.....
Welland	....	....	....	3	1	....	....	1	....	.....	1	4	.....
Whitby	....	1	....	3	5	....	....	....	....	.....	.....	.....	.....
Lock-ups:													
Bracebridge	....	....	....	2	....	....	1	....	....	.....	.....	.....	.....
Gore Bay	....	....	....	1	....	....	....	....	....	.....	.....	.....	.....
Little Current	....	....	....	2	....	....	....	....	....	.....	.....	.....	.....
Manitowaning	....	....	....	....	....	....	....	....	....	.....	.....	.....	.....
Mattawa	....	....	....	2	....	....	....	....	....	.....	.....	.....	.....
Parry Sound	....	....	1	1	....	....	....	....	....	.....	.....	1	.....
Minden	....	....	....	....	....	....	....	....	....	.....	.....	.....	.....
Sudbury	....	....	....	....	....	....	....	....	....	.....	.....	.....	.....
Huntsville	....	....	....	....	....	....	....	....	....	.....	.....	.....	.....
Fort William	....	....	....	....	....	....	....	....	....	.....	.....	.....	.....
Total	1	35	18	334	94	6	4	4	48	23	34	104	27

No. 8.

were *sentenced* during the year.

Counterfeiting and passing counterfeit money.	Cruelty to animals.	Cutting, wounding and attempting same.	Deserting employment.	Destroying and injuring property.	Drunk and disorderly.	Embezzlement.	Escaping from and obstructing constable.	Escaping from prison.	Forgery.	Fraud, or obtaining money under false pretences.	Gambling.	NAME OF GAOL.
...	...	1	...	1	13	...	...	...	...	4	...	Barrie.
...	1	2	...	2	4	1	...	...	1	...	...	Berlin.
...	...	...	...	1	26	...	...	...	2	1	...	Belleville.
...	...	...	...	...	70	...	...	2	...	...	...	Brantford.
...	...	...	...	...	1	...	...	...	...	...	...	Brampton.
...	...	1	...	...	32	...	...	...	1	...	...	Brockville.
...	...	...	...	1	15	1	...	...	...	...	...	Cayuga.
...	...	...	...	...	1	...	...	...	...	...	...	Cornwall.
...	...	...	...	2	13	...	...	...	...	1	...	Cobourg.
...	...	...	...	...	13	...	...	...	...	2	...	Chatham.
...	...	...	...	...	4	...	...	...	1	...	...	Goderich.
...	...	...	...	1	9	1	...	...	...	2	...	Guelph.
...	2	1	...	17	346	1	...	...	4	3	...	Hamilton.
...	...	1	...	...	46	...	...	5	...	1	...	Kingston.
...	1	...	...	3	227	...	6	...	...	2	...	London.
...	...	...	...	...	1	...	...	...	1	...	...	Lindsay.
...	...	...	...	1	1	...	...	...	...	...	...	L'Orignal.
...	...	...	...	1	...	...	1	...	...	...	...	Milton.
...	1	...	1	...	3	...	...	...	...	1	...	Napanee.
...	1	1	...	9	188	...	4	...	...	1	...	Ottawa.
...	...	...	...	2	15	...	...	...	2	7	...	Owen Sound.
...	...	...	...	...	3	...	1	...	...	...	...	Orangeville.
...	...	...	...	1	4	...	...	...	...	1	...	Perth.
...	...	...	...	...	4	...	...	...	...	...	...	Picton.
...	1	...	...	1	2	...	...	...	...	3	...	Penetanguishene.
...	...	1	...	2	13	...	...	...	...	...	...	Peterboro'.
...	...	...	...	...	30	...	...	1	...	...	...	Port Arthur.
...	...	...	...	...	46	...	2	...	...	...	...	Rat Portage.
...	...	...	...	...	...	...	...	...	...	3	...	Simcoe.
1	...	...	...	...	17	...	1	...	1	2	...	St. Catharines.
...	...	...	...	1	63	...	...	...	...	1	...	Sarnia.
...	...	...	...	...	12	1	...	...	...	...	...	Stratford.
...	...	...	...	...	31	...	...	2	2	4	3	Sandwich.
1	...	...	...	...	26	...	...	...	...	...	...	St. Thomas.
...	...	...	...	2	1	...	...	...	...	...	...	Sault Ste. Marie.
...	3	13	2	8	1210	7	4	2	6	8	...	Toronto.
...	...	...	...	...	2	...	...	...	1	3	...	Walkerton.
...	1	...	...	...	13	...	...	...	...	1	...	Woodstock.
...	...	...	...	2	24	...	2	...	...	...	...	Welland.
...	...	...	...	...	...	...	...	...	...	...	...	Whitby.
												Lock-ups :
...	...	...	...	...	7	...	...	...	1	...	...	Bracebridge.
...	...	...	...	...	...	...	...	...	...	...	...	Owen Sound.
...	...	...	...	...	3	...	...	...	...	...	...	Battle Corners.
...	...	...	...	...	13	...	...	...	...	...	...	Manitowaning.
...	...	...	...	...	5	...	...	...	...	...	...	Mattawa.
...	...	...	...	...	...	...	...	...	...	...	...	Parry Sound.
...	...	...	...	...	...	...	...	...	...	...	...	Minden.
...	...	...	...	...	4	...	...	...	...	...	...	Sudbury.
...	...	...	...	...	...	...	...	...	...	...	...	Huntsville.
...	...	...	...	3	36	...	...	...	...	2	...	Fort William.
2	11	21	3	61	2597	12	21	12	23	53	3	Total.

TABLE

Shewing offences for which prisoners

NAME OF GAOL.	Giving liquor to Indians.	Horse, cattle and sheep stealing.	House-breaking and robbery.	Indecent assault and exposure.	Inmates and frequenters of houses of ill-fame.	Keeping houses of ill-fame.	Larceny.	Manslaughter.	Misdemeanour.	Murder.	Perjury.
Barrie		3	3	1			12				
Berlin			2				12				
Belleville	1	4	5	2	1		17				
Brantford	7	1	1				27			1	
Brampton		1					4				
Brockville		1		1			14				1
Cayuga				1	2		8				
Cornwall							17				
Cobourg							16		5		
Chatham	1	4		1	1	2	18		1		
Goderich			1				7				
Guelph		2					7				
Hamilton			15	1			62				
Kingston					1	1	18				
London	1	2	6		1	3	58		2		
Lindsay							7				
L'Orignal		1					3				
Milton		1		1			4				
Napanee					1		4				
Ottawa			10	1	3	3	75				
Owen Sound		1	1		3	2	17				
Orangeville							1				
Perth							6				
Picton							2				
Pembroke			1	1	1	1	4				
Peterborough							10				
Port Arthur	1	1			2	2	15				
Rat Portage	1		2		8	5	9				
Simcoe			2				6	1			
St. Catharines		1	1				33				
Sarnia		2	6		3	2	16				
Stratford		1		3			5				
Sandwich			5	1			21				
St. Thomas	1	4					17				
Sault Ste. Marie	2					1	1	1			
Toronto		2	22	10	40	12	271				
Walkerton		1	3	2	1	1	4				
Woodstock				4			12		2		
Welland		5	3	3			13			1	
Whitby							15				
Lock-ups:											
Bracebridge											
Gore Bay											
Little Current							1				
Manitowaning	1										
Mattawa				2	9	2	5				
Parry Sound											
Minden											
Sudbury											
Huntsville											
Fort William	3	3			3	1	1				
Totals	19	41	89	35	80	38	875	2	10	2	1

No. 8.—*Continued.*

were *sentenced* during the year.

Prostitution.	Rape and assault with intent.	Receiving stolen goods.	Selling liquor without license.	Shooting with intent.	Stabbing.	Threatening and seditious language.	Trespass.	Unlawful Shooting.	Vagrancy.	Other offences not enumerated.	Total.	NAME OF GAOL.
.....	1	1	5	2	.....	1	.....	.....	42	6	123	Barrie.
.....	.....	.....	.....	.....	.....	.....	.....	.....	8	2	56	Bertie.
.....	.....	2	.....	.....	.....	1	5	.....	37	3	123	Belleville.
.....	1	.....	1	.....	.....	.....	.....	.....	27	2	158	Brantford.
.....	.....	.....	.....	.....	.....	.....	.....	.....	15	.....	27	Brampton.
4	1	.....	.....	.....	.....	.....	.....	.....	26	25	112	Brockville.
1	.....	.....	.....	.....	.....	1	1	.....	66	.....	110	Cayuga.
.....	.....	.....	3	.....	.....	.....	.....	.....	.....	.....	25	Cornwall.
.....	.....	.....	.....	.....	1	.....	.....	.....	13	.....	58	Cobourg.
.....	.....	.....	.....	.....	.....	.....	1	.....	7	.....	73	Chatham.
.....	.....	.....	.....	.....	1	.....	.....	.....	16	3	41	Goderich.
.....	.....	.....	1	.....	.....	.....	1	.....	5	.....	34	Guelph.
.....	2	1	1	.....	.....	15	34	.....	120	19	730	Hamilton.
.....	.....	.....	.....	.....	.....	.....	1	.....	22	2	109	Kingston.
.....	.....	.....	.....	1	1	.....	9	.....	83	.....	447	London.
.....	.....	.....	.....	.....	.....	.....	.....	.....	20	1	38	Lindsay.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	7	L'Original.
.....	.....	.....	3	.....	.....	.....	.....	.....	25	.....	39	Milton.
1	.....	.....	.....	.....	.....	.....	.....	.....	13	4	36	Napanee.
.....	.....	1	1	.....	.....	1	.....	.....	26	5	416	Ottawa.
.....	.....	.....	2	.....	.....	.....	2	.....	35	.....	107	Owen Sound.
.....	.....	.....	3	.....	.....	.....	.....	.....	31	2	44	Orangeville.
.....	.....	.....	.....	.....	.....	.....	.....	.....	40	.....	59	Perth.
.....	.....	.....	.....	.....	.....	.....	.....	.....	3	1	16	Picton.
.....	.....	.....	7	.....	.....	.....	.....	.....	14	2	38	Pembroke.
1	.....	.....	4	.....	.....	1	.....	1	37	8	95	Peterborough.
.....	.....	2	18	1	.....	1	.....	.....	17	.....	98	Port Arthur.
.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	83	Rat Portage.
.....	.....	.....	.....	.....	.....	.....	6	.....	6	1	36	Simcoe.
.....	.....	1	.....	.....	.....	.....	.....	.....	5	3	79	St. Catharines.
.....	.....	.....	3	.....	.....	.....	3	.....	94	1	206	Sarnia.
.....	1	.....	.....	.....	.....	.....	2	.....	43	1	86	Stratford.
1	.....	1	.....	1	.....	.....	6	.....	19	1	126	Sandwich.
.....	.....	1	3	.....	.....	.....	19	.....	5	3	87	St. Thomas.
.....	.....	.....	3	.....	.....	.....	.....	.....	5	.....	19	Sault Ste. Marie.
.....	1	2	15	1	.....	.....	47	.....	190	3	2027	Toronto.
.....	3	.....	.....	1	.....	.....	3	.....	17	8	62	Walkerton.
.....	.....	.....	2	.....	.....	.....	2	.....	58	4	111	Woodstock.
.....	.....	2	.....	.....	.....	.....	8	.....	97	2	172	Welland.
.....	.....	.....	.....	.....	.....	.....	.....	.....	10	7	41	Whitby.
												Lock-ups:
.....	1	.....	.....	.....	.....	.....	.....	.....	1	3	16	Bracebridge.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	3	Clear Bay.
.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	7	Little Current.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4	18	Manitowaning.
5	1	.....	2	.....	.....	.....	.....	.....	.....	1	34	Matawa.
.....	2	.....	3	.....	.....	.....	.....	.....	.....	.....	8	Parry Sound.
.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	2	Minden.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4	Sudbury.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....		Huntsville.
.....	.....	.....	.....	.....	.....	.....	.....	.....	3	11	66	Fort William.
13	14	14	80	8	3	21	170	1	1384	140	6499	Totals.

TABLE No. 9.

Shewing the total number of prisoners, male and female, *sentenced* under each offence during the year.

OFFENCES.	Male.	Female.	Total.
Abortion	1		1
Abusive and obscene language	27	8	35
Arson	17	1	18
Assault	313	21	334
Assault, felonious	92	2	94
Attempted suicide	6		6
Abduction	4		4
Bigamy	4		4
Breaches of the peace	47	1	48
Breaches of by-laws	19	4	23
Burglary	34		34
Contempt of Court	103	1	104
Carrying unlawful weapons	27		27
Counterfeiting and passing counterfeit money	2		2
Cruelty to animals	11		11
Cutting, wounding and attempting same	19	2	21
Deserting employment	3		3
Destroying and injuring property	57	4	61
Drunk and disorderly	2132	465	2597
Embezzlement	12		12
Escaping from or obstructing constable	21		21
Escaping from prison	12		12
Forgery	23		23
Fraud and obtaining money or goods under false pretences	51	2	53
Gambling	3		3
Giving liquor to Indians	19		19
Horse, cattle, or sheep stealing	41		41
Housebreaking and robbery	89		89
Incendiarism			
Indecent assault and exposure	33	2	35
Inmates and frequenters of houses of ill-fame	33	47	80
Keeping houses of ill-fame	20	18	38
Larceny	815	60	875
Manslaughter	2		2
Misdemeanor	10		10
Murder	2		2
Perjury			
Prostitution	1	12	13
Rape and assault with intent	14		14
Refusing bail			
Receiving stolen goods	11	3	14
Seduction			
Selling liquor without license	73	7	80
Shooting with intent	8		8
Stabbing	3		3
Threatening and seditious language	17	4	21
Trespass	144	6	150
Unlawful shooting	1		1
Vagrancy	1074	230	1304
Other offences not above enumerated	114	26	140
Totals	5564	926	6490

TABLE No. 10.

Shewing the nationalities, religious denominations, social status, and habits of the prisoners *committed* during the year.

NAME OF GAOL.	Nationalities.						Religious Denominations.					Social and Educational State.					Total number committed to Gaol.
	Canadian.	English.	Irish.	Scotch.	United States.	Other countries.	Roman Catholic.	Church of England.	Presbyterian.	Methodist.	Other denominations.	Married.	Unmarried.	Neither read nor write.	Temperate.	Intemperate.	
Barrie	126	29	45	14	10	12	69	65	52	44	15	84	152	39	78	158	236
Berlin	39	13	3	1	2	7	16	16	6	14	13	16	49	11	40	25	65
Belleville	129	24	26	6	6	4	54	40	10	79	3	65	121	68	106	80	186
Brantford	147	32	27	10	14	3	49	52	17	31	44	67	166	89	88	145	233
Brampton	59	79	77	16	12	4	69	117	34	18	9	53	214	35	71	176	247
Brockville	99	11	26	3	16	5	64	42	21	24	9	49	111	35	36	124	160
Cayuga	62	22	25	6	9	2	25	42	12	27	19	48	77	19	46	79	125
Cornwall	32	3	8	2	4	1	19	9	19	8	2	23	27	13	14	36	50
Cobourg	61	15	10	4	5	1	18	32	9	20	17	36	60	15	32	64	96
Chatham	61	11	10	..	16	5	21	18	12	42	10	51	52	15	55	28	108
Goderich	21	12	16	10	1	2	14	16	20	9	3	20	42	6	27	35	62
Guelph	51	14	12	1	4	5	32	19	17	15	4	21	66	16	42	45	87
Hamilton	409	179	214	52	81	21	351	318	115	128	41	304	649	183	125	828	953
Kingston	84	16	39	7	10	1	68	50	15	18	....	38	119	35	27	130	157
London	383	136	164	58	44	16	238	300	91	138	34	251	550	109	270	531	801
Lindsay	33	5	9	5	3	....	19	11	13	9	2	20	34		25	29	54
L'Orignal	13	2	1	1	2	1	14	1	3	....	2	9	11	9	13	7	20
Milton	74	142	103	32	11	11	91	187	50	24	15	27	346	28	115	258	373
Napanee	34	10	3	1	..	....	9	15	5	13	6	18	30	8	28	20	48
Ottawa	421	67	144	20	37	23	487	135	47	16	27	281	431	213	122	590	712
Orangeville	32	9	13	3			5	19	9	14	10	12	45	26	30	27	57
Owen Sound	80	47	27	28	10	8	41	60	50	20	24	75	125	66	120	80	200
Perth	32	21	18	5	3	3	34	27	13	8	....	24	58	25	30	52	82
Picton	62	6	8	....	4		25	21	3	20	11	55	45	21	8	72	80
Pembroke	40	2	10	6		14	41	10	11	2	8	23	49	33	24	48	72
Peterboro'	51	17	23	3	8	4	48	23	19	13	3	38	68	15	43	63	106
Port Arthur	73	16	6	8	14	3	62	29	18	6	4	23	97	7	38	92	129
Rat Portage	58	11	15	2	15	3	42	5	9	1	19	36	68	20	23	81	104
Simcoe	67	8	11	3	6	..	11	20	12	23	20	30	65	38	34	61	95
St. Catharines	69	10	15	8	14	1	31	38	13	22	13	30	87	30	44	73	117
Sarnia	166	17	54	21	19	1	104	61	51	38	24	77	201	47	80	198	278
Stratford	65	27	31	16	6	4	42	37	38	20	11	30	68	26	72	76	148
Sandwich	90	14	18	3	44	4	51	44	14	30	19	30	114	32	30	78	173
St. Thomas	39	16	13	6	31	1	29	37	1	32	23	30	87	7	64	67	131
Sault Ste. Marie	25	6	1	1	1	1	10	1	2	1	2	7	28	14	9	16	25
Toronto	1284	641	875	165	193	72	1259	1000	345	267	150	1.9	1808	547	694	2506	3200
Walkerton	62	8	12	2	2	2	14	34	26	18	6	33	50	33	66	23	88
Woodstock	125	72	45	20	25	9	64	101	50	66	15	107	189	74	116	180	296
Welland	104	41	46	7	40	7	87	107	16	28	12	69	176	37	79	166	245
Whitby	38	12	10	5	5	2	16	20	8	17	9	24	46	11	43	27	70
Lockups—																	
Bracebridge	7	6	2	3		2	6	7	3	3	1	10	10	10	13	7	20
Gore Bay	2	1						2			1		3	2	2	1	3
Little Current	7	1						3		5		4	4	2	5	3	8
Manitowaning	18						15			3		6	15	8	3	15	18
Mattawa	34		4	1	2	2	36	3		2	2	13	30	18	7	36	43
Parry Sound	10	....	2	1		1	5	4	3	3	1	9	6	1	12	2	14
Minden	4								2	2		3	1	1	3	1	4
Sudbury	2	1			2	2	4	1	....		2	3	4		3	4	7
Huntsville	1		1				2						2		1	1	2
Fort William	33	7	4	3	5	14	39	7	4	5	11	2	43	21	12	54	66
Totals	4956	1839	2226	565	736	284	3844	3461	1311	1371	658	3709	6936	2230	3246	7399	10645

TABLE

Shewing the occupations, trades or callings

NAME OF GAOL.	Agents and Commercial Travellers.	Auctioneers.	Bakers.	Barbers.	Bartenders.	Blacksmiths and Boilermakers.	Boot and Shoemakers.	Boys (no occupation).	Brewers and Distillers.	Bricklayers and Bricklayers.	Broom, Brush and Basket-makers.	Butchers.	Cabinetmakers and Upholsterers.	Carpenters and Joiners.	Carriage and Waggonmakers.	Cigarmakers.	Clerks, Book-keepers and Students.
Barrie	3	....	1	....	....	2	4	7	....	1	....	....	....	3	....	....	4
Berlin	1	....	....	1	....	....	2	9	....	....	....	1	1	1	....	2	1
Belleville	1	....	1	1	....	1	2	6	....	....	1	1	5	4	1	....	3
Brantford	....	2	1	1	....	....	1	12	....	2	1	....	....	5	....	2	4
Brampton	....	....	1	....	....	....	5	1	....	5	....	2	....	6	....	2	4
Brockville	1	....	....	3	....	....	1	1	....	1	....	1	....	3	....	1	....
Cayuga	....	....	....	....	1	2	5	....	....	....	....	....	....	....	....	....	....
Cornwall	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Cobourg	1	....	1	1	....	2	4	....	....	1	....	....	3	1	1	....	....
Chatham	1	....	....	....	....	1	1	....	....	....	....	4	....	5	1	....	1
Goderich	....	....	....	....	....	4	1	2	....	....	....	....	....	2	....	....	....
Guelph	2	....	....	....	....	3	1	....	....	....	....	....	2	....	....	....	3
Hamilton	2	....	4	7	....	23	33	32	....	8	7	7	3	21	2	12	12
Kingston	1	1	4	2	....	3	4	....	....	1	....	....	....	11	....	....	3
London	9	....	11	8	2	10	6	26	....	7	1	6	4	24	3	21	13
Lindsay	....	....	1	....	....	....	....	1	....	....	....	....	....	1	....	....	1
L'Orignal	....	....	....	....	....	....	....	....	....	....	....	....	....	4	....	....	....
Milton	....	....	3	1	....	2	5	3	....	....	....	....	2	14	....	....	2
Napanee	....	....	....	....	....	....	2	....	....	....	....	....	1	....	....	....	....
Ottawa	8	....	....	15	2	3	25	25	....	3	....	5	....	13	2	2	14
Owen Sound	2	....	....	2	2	1	2	9	....	4	....	2	4	6	3	....	6
Orangeville	....	....	....	....	....	1	1	6	....	....	....	....	....	....	....	....	....
Perth	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Picton	....	....	....	....	....	1	....	....	....	1	....	3	....	4	....	....	1
Pembroke	....	....	....	....	1	....	5	1	....	....	....	....	....	....	....	....	....
Peterboro'	1	....	....	....	3	2	4	....	....	1	....	....	....	1	....	....	....
Port Arthur	....	....	2	....	....	2	....	....	....	....	1	....	....	6	....	....	3
Rat Portage	....	....	....	1	....	....	1	1	....	....	....	1	....	1	....	....	1
Simcoe	2	....	....	....	....	1	1	4	....	....	....	....	....	3	....	1	....
St. Catharines	1	....	....	1	....	....	3	2	....	....	....	4	....	6	....	....	4
Sarnia	....	....	1	....	....	....	1	....	....	....	....	....	....	1	....	....	....
Stratford	....	6	....	2	....	3	6	....	....	....	....	1	....	8	....	2	2
Sandwich	2	....	1	2	....	1	2	1	....	....	....	4	....	6	....	....	3
St. Thomas	1	....	2	1	....	2	....	....	....	....	2	2	1	4	....	....	3
Sault Ste. Marie	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Toronto	49	....	21	17	11	43	75	74	2	42	8	30	29	81	8	16	85
Walkerton	....	....	1	....	....	3	....	8	1	....	....	2	....	2	....	....	1
Woodstock	6	....	1	....	1	5	3	10	1	....	....	2	4	10	1	6	3
Welland	1	....	....	6	....	7	6	....	....	2	....	2	2	12	....	....	2
Whitby	....	1	....	....	1	....	1	....	....	....	....	....	1	2	....	....	1
Lock-ups—																	
Bracebridge	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....
Gore Bay	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Little Current	....	....	....	....	....	....	....	1	1	....	....	....	....	1	....	....	....
Manitowaning	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Mattawa	....	....	....	1	....	....	....	....	....	....	....	....	....	2	....	....	....
Parry Sound	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Sudbury	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Minden	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Huntsville	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Fort William	....	....	....	....	....	....	8	....	....	....	....	....	....	2	....	....	2
Totals	97	10	57	73	24	128	221	242	5	79	21	79	63	286	22	67	183

No. 11.

of the Prisoners *committed* during the year.

Collectors.	Contractors.	Constables.	Coopers.	Dentists.	Doctors and Druggists.	Dressmakers.	Engravers.	Engineers and Machinists.	Farmers and Yeomen.	Gardners.	Grocers.	Harness and Trunkmakers.	Hatters.	Hotelkeepers and Licensed Victuallers.	Householders.	NAME OF GAOL.
....	....	1	1	....	....	1	....	2	33	....	....	....	....	.....	2	Barrie.
....	....	....	3	....	....	....	....	....	2	....	....	1	1	1	....	Berlin.
....	....	....	....	....	1	....	1	7	15	....	....	....	....	.....	9	Belleville.
....	....	1	2	....	....	....	2	2	21	1	....	2	....	1	....	Brantford.
....	....	....	1	....	....	....	....	6	3	....	....	....	....	.....	....	Brampton.
....	....	1	....	....	1	....	....	1	11	....	3	....	1	.....	10	Brockville.
....	....	....	....	....	....	....	....	2	17	....	....	....	....	.....	....	Cayuga.
....	....	....	....	....	....	....	....	....	11	....	....	1	....	.....	....	Cornwall.
....	....	....	2	....	....	....	....	....	9	....	....	....	....	2	....	Cobourg.
....	....	....	1	....	1	1	....	1	9	2	....	1	....	1	....	Chatham.
....	....	....	....	....	....	1	....	1	12	....	....	....	....	.....	....	Goderich.
....	....	1	1	....	....	....	....	....	12	....	....	....	....	1	....	Guelph.
....	....	....	3	1	2	....	....	13	7	5	....	1	5	2	....	Hamilton.
....	....	....	1	....	....	1	....	3	3	....	....	....	....	.....	....	Kingston.
..	1	2	4	1	....	....	....	5	111	7	2	1	1	1	14	London.
....	....	....	....	....	....	....	....	....	5	....	....	....	....	.....	....	Lindsay.
....	....	....	....	....	....	....	....	....	4	....	....	....	....	.....	....	L'Orignal.
....	....	....	3	....	....	....	....	10	1	....	....	2	....	2	....	Milton.
....	....	....	....	....	....	....	....	....	6	....	....	....	....	.....	....	Napanee.
....	1	....	....	....	....	....	....	5	18	2	....	8	....	.....	23	Ottawa.
....	....	....	5	....	....	7	....	5	20	....	....	4	1	....	5	Owen Sound.
..	....	....	....	....	....	....	....	....	4	....	....	....	....	4	....	Orangeville.
....	....	....	....	....	1	....	....	1	7	....	....	....	....	1	2	Perth.
....	....	....	1	....	....	....	....	....	4	....	....	....	....	.....	....	Picton.
..	....	....	....	....	....	....	....	....	10	....	....	1	....	1	....	Pembroke.
.	....	....	....	....	....	....	....	....	6	....	2	....	....	3	....	Peterboro'.
..	....	....	....	....	....	....	....	....	3	....	....	....	....	5	1	Port Arthur.
....	....	....	....	....	....	....	....	1	4	....	....	....	....	.....	....	Rat Portage.
..	....	....	1	....	....	....	....	....	10	2	....	1	....	2	....	Samone.
..	....	....	....	....	1	....	....	1	4	....	....	....	....	1	2	St. Catharines.
..	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	Sarnia.
..	....	....	1	....	....	....	....	....	12	....	....	....	....	2	....	Stratford
..	1	....	....	2	....	....	....	3	13	....	1	....	....	2	....	Sandwich.
.	1	....	1	....	....	1	....	2	14	2	....	....	....	1	....	St. Thomas.
..	1	....	....	....	....	....	....	....	6	....	....	....	....	1	....	Sault, Ste. Mary.
1	2	1	13	1	5	8	4	60	35	26	20	6	11	5	3	Toronto.
.	....	....	....	....	....	....	....	....	7	....	....	....	....	3	....	Walkerton.
.	....	....	3	....	....	....	....	2	4	....	....	....	1	2	....	Woodstock.
.	....	....	2	....	1	....	....	5	19	1	....	....	....	2	....	Welland.
....	....	....	2	....	....	....	....	....	12	....	....	....	....	....	....	Whitby.
..	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	Lon[illegible]
..	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	[illegible] Bridge.
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	Gore Bay.
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	Little Current.
..	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	Manitoulin.
....	....	....	....	....	....	....	....	....	3	....	....	....	....	....	2	Meaford.
..	....	....	....	....	....	....	....	....	6	....	....	....	....	....	1	Parry Sound.
..	....	....	....	....	....	....	....	....	3	....	....	....	....	....	....	Sudbury.
..	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	Mimico.
..	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	Huntsville.
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	Fort William.
1	6	8	51	5	13	20	7	138	516	48	28	29	21	47	75	

TABLE

Shewing the occupations, trades or callings

NAME OF GAOL.	Labourers.	Lawyers.	Lumbermen.	Masons and Stonecutters.	Merchants and Traders.	Millwrights and Wheelwrights.	Millers.	Moulders.	Pedlars and Hawkers.	Printers.	Plumbers and Painters.	Photographers.	Prostitutes.	Railway Employees.	Sailors and Fishermen.
Barrie	104	1	2	2	....	1	1	....	.....	3	2	1	....	2	6
Berlin	30	....	....	....	....	....	....	....	1	....	1	....	....	....	....
Belleville	88	....	....	....	....	....	1	....	2	1	3	....	20	1	2
Brantford	123	....	....	3	....	1	....	2	.....	3	1	....	7	....	1
Brampt n	161	....	....	4	....	....	....	6	.....	1	9	....	....	....	9
Brockville	88	....	....	....	....	....	....	1	.....	....	2	....	....	1	4
Cayuga	75	....	....	....	....	....	....	2	.....	....	2	....	....	....	2
Cornwall	24	....	....	1	1	....	....	1	1	....	....	....	....	....	1
Cobourg	40	....	....	1	....	....	1	1	.....	....	4	1	....	....	1
Chatham	49	....	1	....	2	1	....	....	1	....	....	....	2	....	1
Goderich	19	....	....	1	....	....	1	....	....	....	....	....	....	....	....
Guelph	30	....	....	2	3	....	....	2	1	....	4	....	....	1	1
Hamilton	442	....	....	13	2	1	1	26	3	6	19	....	3	....	8
Kingston	57	....	....	....	....	....	....	....	....	3	2	....	....	....	11
London	250	....	....	8	1	....	1	24	9	....	31	....	....	4	9
Lindsay	34	....	....	1	1	....	....	1	1	2	....	....	....	....	....
L'Orignal	4	....	....	....	....	....	....	....	....	....	....	....	....	....	2
Milton	275	....	....	3	....	....	....	2	1	1	10	....	....	....	7
Napanee	22	....	....	....	....	....	....	1	2	....	....	....	1	....	1
Ottawa	357	....	....	7	2	....	....	6	18	9	13	....	38	1	4
Owen Sound	60	....	....	4	....	....	....	....	.....	1	5	....	6	....	7
Orangeville	26	....	....	....	....	....	....	....	.....	....	1	....	....	....	....
Perth	55	....	....	....	....	1	....	1	.....	....	....	....	....	....	....
Picton	38	....	....	7	....	....	....	....	1	4	....	....	....	....	3
Pembroke	29	....	4	....	....	2	....	....	.....	....	....	....	....	....	....
Peterboro'	58	....	....	....	....	....	....	2	.....	1	6	3	1	....	1
Port Arthur	57	....	....	3	1	....	....	1	.....	....	2	....	1	6	5
Rat Portage	70	3	2	....	1	....	....	....	.....	....	....	....	7	....	....
Simcoe	35	1	1	1	4	....	....	....	.....	....	3	....	....	....	2
St. Catharines	50	....	....	1	2	....	1	1	.....	....	5	....	1	....	9
Sarnia	235	....	....	5	....	....	....	....	.....	....	....	....	....	....	5
Stratford	69	....	....	1	....	1	....	3	3	....	2	....	....	3	....
Sandwich	78	....	....	1	....	....	....	2	1	1	3	....	1	....	10
St. Thomas	44	....	....	1	....	....	....	9	.....	1	3	....	....	3	....
Sault Ste. Marie	17	....	....	....	....	....	....	....	.....	1	....	....	....	....	4
Toronto	987	4	3	27	13	1	2	37	50	46	110	....	329	14	34
Walkerton	35	....	....	....	1	....	....	....	.....	....	....	2	2	....	2
Woodstock	159	....	....	3	....	....	....	3	3	2	7	....	....	....	2
Welland	114	....	....	9	....	1	....	6	.....	2	5	....	....	5	11
Whitby	26	....	1	1	....	....	1	6	.....	2	....	....	....	....	1
Lock-ups—															
Bracebridge	16	....	1	....	....	....	....	....	.....	....	....	....	....	....	....
Gore Bay	2	....	....	....	....	....	....	....	.....	....	....	....	....	....	....
Little Current	3	....	....	....	....	....	....	....	.....	....	....	....	....	....	1
Manitowaning	1	....	....	....	....	....	....	....	.....	....	....	....	....	....	6
Mattawa	28	1	....	1	....	....	....	....	.....	....	....	....	5	....	....
Parry Sound	3	....	....	....	....	....	....	....	.....	....	1	....	....	....	2
Sudbury	4	....	....	....	....	....	....	....	.....	....	....	....	....	....	....
Minden	3	....	....	....	....	....	....	....	.....	....	....	....	....	....	....
Huntsville	2	....	....	....	....	....	....	....	.....	....	....	....	....	....	....
Fort William	20	....	7	....	....	....	....	....	.....	....	....	....	2	2	8
Totals	4,596	10	22	111	34	10	10	146	98	90	256	7	426	43	183

No. 11.

of the Prisoners *committed* during the year.

School and Music Teachers.	Servants and Washerwomen.	Tailors.	Tanners and Currriers.	Teamsters, Drivers and Grooms.	Telegraph Operators.	Tinsmiths.	Watchmakers and Jewellers.	Weavers and Woodworkers.	Whitewashers.	Woodturners.	No Occupation.	Other Occupations not enumerated.	Total.	NAME OF GAOL.
2	27	4	....	3	2	....	....	....	....	....	1	7	236	
....	3	....	....	....	....	....	....	....	....	....	....	3	65	Barrie.
....	....	....	....	....	1	1	....	....	2	....	4	....	186	Berlin.
1	23	1	....	....	....	2	....	1	....	....	1	....	233	Belleville.
....	5	1	....	....	....	3	....	1	....	....	7	4	247	Brantford.
....	6	2	....	....	1	....	....	1	2	....	1	12	160	Brampton.
....	5	....	....	....	....	1	1	....	....	....	....	9	125	Cayuga.
....	6	....	1	....	....	....	....	....	....	....	....	1	50	Cornwall.
1	5	1	1	....	....	1	1	1	....	....	3	5	96	Cobourg.
....	7	2	....	1	....	....	....	....	1	....	3	1	103	Chatham.
....	....	1	1	....	....	....	....	1	....	....	9	6	62	Goderich.
....	1	....	....	1	....	....	2	....	2	1	6	4	87	Guelph.
1	129	11	1	6	....	8	1	1	....	....	6	53	953	Hamilton.
....	10	2	....	2	....	6	....	....	....	....	26	....	157	Kingston.
1	84	16	5	21	....	4	3	1	7	....	....	21	801	London.
....	1	....	1	....	....	1	....	....	....	....	1	1	54	Lindsay.
....	4	....	....	1	....	....	....	....	....	....	1	....	20	L'Orignal.
....	4	5	7	1	....	1	2	1	....	....	....	3	373	Milton.
....	....	2	....	....	....	....	....	....	....	....	1	9	48	Napanee.
2	29	10	....	10	1	9	3	1	8	....	4	6	712	Ottawa.
2	5	2	....	2	....	....	....	....	4	....	6	6	200	Owen Sound.
....	7	....	....	....	....	....	....	....	....	....	4	3	57	Orangeville.
....	9	....	....	....	....	....	....	....	1	....	....	3	82	Perth.
....	2	....	....	....	....	....	....	....	....	....	2	8	80	Picton.
....	....	....	....	....	....	....	....	....	....	....	17	1	72	Pembroke.
....	1	....	2	....	....	....	....	....	1	....	1	6	106	Peterboro'.
....	12	....	....	....	2	....	....	1	1	....	1	4	120	Port Arthur.
....	8	....	....	....	....	....	....	....	....	....	....	2	104	Rat Portage.
....	4	2	....	....	....	....	....	2	....	....	8	4	95	Simcoe.
....	2	....	....	1	....	....	....	....	....	....	10	4	117	St. Catharines.
....	5	3	....	....	....	....	....	....	....	....	18	3	278	Sarnia.
....	4	....	1	1	....	2	1	1	....	....	3	8	148	Stratford.
....	11	2	....	....	....	....	....	....	....	....	1	18	173	Sandwich.
....	12	....	....	3	1	....	....	1	....	....	....	8	126	St. Thomas.
....	....	....	....	....	....	....	....	....	....	....	2	2	35	Sault Ste. Marie.
5	200	60	4	123	7	20	5	6	28	5	212	76	3,200	Toronto.
....	3	....	....	....	....	....	....	....	1	....	11	3	88	Walkerton.
....	8	3	3	6	....	1	....	....	2	....	16	13	296	Woodstock.
....	4	2	....	6	....	2	....	....	....	....	1	7	245	Welland.
....	3	....	....	....	....	....	....	....	....	1	5	2	70	Whitby.
....	1	....	....	....	....	....	....	....	....	....	....	....	20	Lockup— Bracebridge.
....	....	....	....	....	....	....	....	....	....	....	1	....	3	Cape Ray.
....	....	....	....	1	....	....	....	....	....	....	....	....	8	Little Current.
....	....	....	....	....	....	....	....	....	....	....	10	....	18	Manitowaning.
....	....	....	....	....	....	....	....	....	....	....	....	....	43	Mattawa.
....	....	....	....	....	....	....	....	....	....	....	1	....	14	Parry Sound.
....	....	....	....	....	....	....	....	....	....	....	....	....	4	Sudbury.
....	....	....	....	....	....	....	....	....	....	....	....	....	7	Minden.
....	....	....	....	....	....	....	....	....	....	....	....	....	2	Huntsville.
....	6	....	....	5	....	....	....	....	....	....	2	2	66	Fort William.
15	656	132	27	194	15	60	19	20	60	7	406	328	10645	

TABLE

Shewing the number of escapes and deaths, the revenues derived from prison and lowest number of prisoners

NAME OF GAOL.	Prisoners who escaped and evaded recapture.	Prisoners who escaped and were recaptured.	Prisoners who died.	Actual cash revenue derived from prison labour.
				$
Barrie			3	
Berlin		1		
Belleville			1	
Brantford	1	2		
Brampton			1	
Brockville			1	
Cayuga			1	
Cornwall				
Cobourg				
Chatham				
Goderich			2	
Guelph				
Hamilton	1			
Kingston				
London	1			
Lindsay				
L'Orignal				
Milton			2	
Napanee				
Ottawa				136 00
Owen Sound			2	
Orangeville			3	
Perth			2	
Picton				
Pembroke			2	
Peterboro'			1	
Port Arthur		1		
Rat Portage	2			27 75
Simcoe				
St. Catharines			1	
Sarnia			1	
Stratford	1	1	1	
Sandwich		1		
St. Thomas				
Sault Ste. Marie				
Toronto		1	11	
Walkerton				
Woodstock			2	200 00
Welland			1	
Whitby			1	15 25
Lock-ups:				
Bracebridge				
Gore Bay				
Little Current				
Manitowaning				
Mattawa				
Parry Sound		2		
Minden	1			
Sudbury				
Huntsville				
Fort William	1			
Total	8	9	39	379 00

No. 12.

labour, the cost of diet, the accommodation of the various gaols, and the highest in custody during the year.

Cost of daily rations per prisoner.	Are regulations with respect to dietary observed?	Number of cells in each gaol.	Number of distinct corridors or wards in each gaol.	Greatest number of prisoners confined in gaol at any time during the year.	Lowest number of prisoners confined in gaol at any time during the year.	NAME OF GAOL.
cts.						
9	Yes.	24	8	37	12	Barrie.
11 1-4	Yes.	25	5	12	.....	Berlin.
7	Yes.	18	4	33	7	Belleville.
6 3-4	Yes.	24	6	36	10	Brantford.
6 1-2	Yes.	25	4	16	3	Brampton.
5 3-4	Yes.	29	3	33	5	Brockville.
10 1-2	Yes.	14	4	17	2	Cayuga.
13	Yes.	17	5	13	.....	Cornwall.
9 3-4	Yes.	24	5	24	5	Cobourg.
6 1-2	Yes.	26	4	16	3	Chatham.
9	Yes.	12	4	17	6	Goderich.
8	Yes.	36	8	16	3	Guelph.
5 7-8	Yes.	60	6	66	27	Hamilton.
9 1-4	Yes.	53	9	23	8	Kingston.
6	Yes.	57	9	58	18	London.
6 1-4	Yes.	18	4	19	1	Lindsay.
8	Yes.	18	6	5	.....	L'Orignal.
5 1-5	Yes.	23	4	26	3	Milton.
6 3-4	Yes.	18	4	8	1	Napanee.
7	Yes.	96	8	46	16	Ottawa.
9	Yes.	32	6	42	11	Owen Sound.
7 2-3	Yes.	23	6	28	9	Orangeville.
6 1-4	Yes.	18	4	34	9	Perth.
8	Yes.	26	6	10	.....	Picton.
6 3-4	Yes.	24	4	19	7	Pembroke.
12 3-4	Yes.	18	4	28	9	Peterboro'.
14	Yes.	32	5	29	4	Port Arthur.
20 1-2	Yes.	7	2	13	1	Rat Portage.
7	Yes.	24	8	16	2	Simcoe.
8	Yes.	40	8	18	5	St. Catharines.
8 3-4	Yes.	19	5	36	10	Sarnia.
8	Yes.	24	6	19	5	Stratford.
9 3-4	Yes.	32	4	24	10	Sandwich.
7	Yes.	16	4	23	4	St. Thomas.
14	Yes.	14	3	13	1	Sault Ste. Marie.
7	Yes.	184	12	222	131	Toronto.
7 3-4	Yes.	24	4	17	3	Walkerton.
8	Yes.	32	5	34	7	Woodstock.
7 1-2	Yes.	50	5	36	6	Welland.
8	Yes.	25	5	16	1	Whitby.
						Lock-ups :
30	Yes.	5	3	2	1	Bracebridge.
30	Yes.	5	4	1	.....	Cape Rich.
30	Yes.	5	2	3	.....	Little Current.
30	Yes.	5	4	3	1	Manitowaning.
30	Yes.	5	2	12	1	Meaford.
30	Yes.	5	4	3	1	Parry Sound.
45	Yes.	6	2	1	.....	Minden.
30	Yes.	5	2	2	.....	Sudbury.
30		7	1	1	.....	Huntsville.
15		10	4	6	1	Fort William.
.....	.....	.....	.....	.....	.....	Total.

TABLE

Shewing the number of prisoners, how maintained, cost of maintenance, and

NAME OF GAOL.	How Maintained.						
	Total number of prisoners committed during the year.	Number of prisoners whose maintenance was defrayed by Province.	Number of prisoners whose maintenance was defrayed by the Municipalities.	Number of days custody of Government prisoners.	Number of days custody of Municipal prisoners.	Cost of food, fuel and clothing.	Cost of official salaries.
						$ c.	$ c.
Barrie	236	109	127	3878	5101	1808 25	1828 50
Berlin	65	29	36	709	841	407 49	1250 00
Belleville	186	87	99	2508	4320	738 00	1400 00
Brantford	233	81	152	1894	3667	1284 93	1650 00
Brampton	247	9	238	386	2354	514 46	1150 00
Brockville	160	41	119	1270	5348	937 34	1692 00
Cayuga	125	23	102	752	2616	753 33	1225 00
Cornwall	50	31	19	484	453	230 52	1290 00
Cobourg	96	42	54	1512	3483	1338 44	1580 00
Chatham	103	43	60	1735	1222	566 18	1653 50
Goderich	62	18	44	613	3065	697 29	1370 00
Guelph	87	31	56	1138	1658	871 24	1350 00
Hamilton	953	134	819	3903	12675	2759 44	2900 00
Kingston	157	46	111	1084	4561	1722 09	1838 00
London	801	140	661	2876	10216	3780 35	3758 40
Lindsay	54	17	37	527	2036	323 77	1180 00
L'Orignal	20	6	14	284	534	285 01	800 00
Milton	373	25	348	361	3649	380 49	1015 00
Napanee	48	10	38	242	1543	455 96	1050 00
Ottawa	712	231	481	4750	6933	2426 10	2150 00
Owen Sound	200	38	162	1398	5689	1965 05	1750 00
Orangeville	57	10	47	124	5738	907 00	1250 00
Perth	82	16	66	356	5198	914 65	1440 00
Picton	80	65	15	211	614	358 80	850 00
Pembroke	72	25	47	1032	2126	445 22	1281 50
Peterborough	106	91	15	666	4920	1240 59	1350 00
Port Arthur	120	120	.....	5373	.....	1818 07	1919 76
Rat Portage	104	104	.....	2119	.....	884 63	2044 00
Simcoe	95	41	54	690	1098	449 17	1050 00
St. Catharines	117	63	54	1841	1985	1443 43	1575 17
Sarnia	278	52	226	1391	5371	2087 08	1400 00
Stratford	148	27	121	797	3476	879 75	1250 00
Sandwich	173	102	71	2302	3800	873 20	2140 50
St. Thomas	126	55	71	2256	2080	418 25	1761 40
Sault Ste. Marie	35	35	.....	2374	.....	891 99	1050 00
Toronto	3200	468	2732	11369	55231	10579 85	8947 53
Walkerton	88	37	51	1351	1107	517 08	1325 00
Woodstock	296	42	254	1380	4272	1170 07	1800 00
Welland	245	50	195	1100	5259	1825 89	1613 50
Whitby	70	42	28	1130	1730	585 26	1605 00
Lock-ups:							
Bracebridge	20	20	.....	145	.....	87 00	200 00
Gore Bay	3	3	.....	3	.....	56 35	200 00
Little Current	8	8	.....	66	.....	75 81	200 00
Manitowaning	18	18	.....	80	.....	90 50	200 00
Mattawa	43	22	21	409	.....	174 85	304 50
Parry Sound	14	14	.....	171	.....	55 00	200 00
Huntsville	2	2	.....	2	.....	.....	200 00
Minden	4	.....	4	.....	8	3 60	150 00
Haliburton	.....	.....	.....	.....	.....	.....	.....
Sudbury	7	7	.....	45	.....	50 00	225 00
Fort William	66	66	.....	329	.....	171 61	277 50
Totals	10645	2795	7849	71416	185978	53300 43	71690 76

No. 13.

salaries of the various gaol officials, for the year ended 30th September, 1886

Expenditures.					Salaries of				
Cost of repairs.	Total gaol expenditure for the year.	Average cost per prisoner for food, clothing, fuel and repairs.	Average cost per prisoner of salaries and other charges.	Average cost per prisoner for entire gaol expenditure.	Gaolers.	Turnkeys.	Matrons.	Gaol Surgeons.	NAME OF GAOL.
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	
247 30	3884 05	8 71	7 74	16 45	800 00	500 00	225 00	200 00	Barrie.
	1857 40	6 27	19 23	25 50	700 00	450 00	140 00	100 00	Berlin.
	2148 09	3 96	7 56	11 49	600 00	450 00	200 00	150 00	Belleville.
77 56	2016 40	5 85	7 18	12 81	650 00	500 00	300 00	200 00	Brantford.
45 30	1750 70	2 26	4 05	6 31	700 00	400 00	200 00	50 00	Brampton.
16 36	2043 70	5 08	10 57	16 58	1000 00	400 00	150 00	100 00	Brockville.
149 77	2128 16	7 22	9 80	17 02	600 00	300 00	125 00	140 00	Cayuga.
. . .	1520 72	4 07	25 80	30 41	740 00	250 00	100 00	200 00	Cornwall.
467 00	3837 44	18 79	16 47	37 27	800 00	300 00	200 00	80 00	Cobourg.
88 37	2088 05	6 32	16 16	22 48	750 00	450 00	200 00	175 00	Chatham.
94 25	2141 34	12 76	22 10	34 86	600 00	500 00	150 00	120 00	Goderich.
. . .	2251 24	10 07	15 51	25 57	600 00	450 00	200 00	100 00	Guelph.
1061 43	6699 87	4 32	3 04	7 36	1000 00	1400 00	450 00	250 00	Hamilton.
784 34	4944 48	14 96	14 70	17 66	800 00	600 00	300 00	150 00	Kingston.
200 00	7758 72	1 06	4 03	5 09	750 00	2149 50	450 00	200 00	London.
. . .	1504 77	1 09	21 87	22 96	700 00	300 00	200 00	80 00	Lindsay.
. . .	1888 01	14 25	40 10	54 35	650 00	. . .	150 00	50 00	L'Orignal.
2 80	1398 39	1 05	2 72	3 77	500 00	300 00	100 00	60 00	Milton.
50 00	1250 40	10 34	21 87	32 41	475 00	400 00	100 00	75 00	Napanee.
1258 34	2844 11	3 14	3 02	8 16	600 00	1000 00	450 00	200 00	Orillia.
100 00	2880 05	5 05	8 76	13 81	700 00	700 00	300 00	150 00	Owen Sound.
150 00	2240 00	18 36	21 80	40 28	600 00	400 00	150 00	100 00	Orangeville.
12 00	2000 05	11 30	17 31	28 80	800 00	400 00	100 00	80 00	Perth.
. . .	1908 80	4 48	10 62	15 10	400 00	350 00	100 00	50 00	Picton.
. . .	1720 72	6 38	17 80	24 18	600 00	400 00	125 00	100 00	Prescott.
300 20	1800 43	14 61	12 75	27 34	600 00	400 00	150 00	150 00	Peterborough.
171 45	3000 28	16 38	16 00	32 38	600 00	1044 75	175 00	100 00	Port Arthur.
20 00	2004 68	8 72	13 66	22 37	800 00	744 00	200 00	200 00	Rat Portage.
166 82	1897 80	3 87	11 05	16 92	400 00	300 00	200 00	100 00	Simcoe.
36 05	2054 05	12 64	15 40	20 10	720 00	420 00	200 00	150 00	St. Catharines.
44 00	3641 08	7 67	5 04	12 71	800 00	400 00	200 00	150 00	Sarnia.
. . .	2125 70	5 94	8 44	14 38	800 00	425 00	250 00	100 00	Stratford.
1307 92	4321 62	12 00	12 31	24 31	900 00	1050 00	250 00	200 00	Sandwich.
12 00	2102 84	3 42	13 08	17 40	600 00	811 40	200 00	150 00	St. Thomas.
7 70	1069 78	26 28	30 00	56 28	400 00	300 00	100 00	100 00	Sault Ste. Marie.
281 29	13088 60	3 31	2 71	6 02	1700 00	3000 00	600 00	1000 00	Toronto.
40 64	1802 72	6 90	15 05	21 16	600 00	475 00	300 00	100 00	Walkerton.
770 47	3749 54	6 55	6 18	12 73	800 00	500 00	300 00	300 00	Woodstock.
84 65	3004 94	7 80	6 18	14 98	600 00	600 00	300 00	150 00	Welland.
100 00	2230 20	9 78	22 92	32 70	800 00	500 00	125 00	200 00	Whitby.
									Lindsay.
	287 60	4 26	10 00	14 26	500 00				Bracebridge.
1 00	257 46	10 12	60 66	80 78	500 00				Gore Bay.
	276 81	2 47	75 00	34 43	500 00				Little Current.
	250 50	5 03	11 11	16 14	500 00				Manitowaning.
274 99	725 04	10 44	7 98	17 42	800 00				Manitou.
10 00	297 01	4 64	14 28	18 92	200 00				Parry Sound.
	500 00		100 00	100 00	500 00				Huntsville.
	150 00	00	37 50	38 40	150 00				Minden.
					150 00				Haliburton.
5 00	280 00	7 86	30 14	40 00					Sudbury.
20 95	472 06	3 00	4 20	7 25	300 00				Fort William.
8758 07	138744 26	5 89	6 73	12 56					

TABLE No. 15.

Shewing the daily cost per prisoner in each of the gaols, excluding the district lock-ups, for the year ending the 30th September, 1886.

NAME OF GAOL.	Number of prisoners committed during the year.	Total days stay of prisoners during the year.	Cost of fuel, food and clothing.	Average cost per day for each prisoner.
			$ c.	Cents.
Barrie	236	8979	1808 25	20.13
Berlin	65	1550	407 49	26.28
Belleville	186	6828	738 00	10.80
Brantford	233	5561	1284 93	23.10
Brampton	247	2740	514 46	18.77
Brockville	160	6618	937 34	14.16
Cayuga	125	3368	753 33	22.36
Cornwall	50	937	230 52	24.60
Cobourg	96	4995	1338 44	26.79
Chatham	103	2957	566 18	19.14
Goderich	62	3678	697 29	18.95
Guelph	87	2796	871 24	31.16
Hamilton	953	16578	2759 44	16.69
Kingston	157	5645	1722 09	30.50
London	801	13092	3780 35	28.87
Lindsay	54	2563	323 77	12.63
L'Orignal	20	818	285 01	34.84
Milton	373	4010	380 49	9.48
Napanee	48	1785	455 96	25.54
Ottawa	712	11683	2426 10	20.76
Owen Sound	200	7087	1965 05	27.72
Orangeville	57	5862	907 00	15.64
Perth	82	5554	914 65	16.46
Picton	80	825	358 80	43.49
Pembroke	72	3158	445 22	14.09
Peterboro'	106	5586	1240 59	22.20
Port Arthur	120	5373	1818 07	33.83
Rat Portage	104	2119	884 63	41.75
Simcoe	95	1788	449 17	25.12
St. Catharines	117	3826	1443 43	37.72
Sarnia	278	6762	2087 08	30.86
Stratford	148	4273	879 75	20.59
Sandwich	173	6102	873 20	14.31
St. Thomas	126	4336	418 25	9.65
Sault Ste. Marie	35	2374	891 99	37.15
Toronto	3200	66600	10579 85	15.88
Walkerton	88	2458	517 08	21.03
Woodstock	296	5652	1170 07	20.70
Welland	245	6359	1825 89	28.71
Whitby	70	2860	585 26	20.46
Totals	10485	256135	52535 71	20.51

SEPARATE REPORTS UPON COMMON GAOLS.

Barrie Gaol.

	1884.	1885.	1886.
Prisoners committed during the year	348	405	236
Greatest number confined at any one time.	40	52	37
Number of re-committals	55	47	19
Total cost of maintaining gaol	$3,545.93	$4,797.84	$3,884.05

A copy of the report made to the Government by me on this gaol is annexed.

"I inspected the Barrie gaol on the 9th June, when there were eighteen males and five females prisoners in custody. Several of the former were charged with very serious offences, such as arson, rape, forgery, burglary, aggravated assault, etc.

"The gaol was in good order and well kept. The repairs formerly suggested had been made. The wash-shed adjoining the work-yard was, however, in a poor condition, being badly constructed between an angle of the outer wall and a brick wall dividing it from the work-yard. The walls referred to form the three sides of the shed. The roof, which rises about half-way up the wall, affords from its height every facility for escape, and there is only a wooden door separating the shed enclosure from the work-yard. As the prisoners have the use of axes and other implements in the wood-yard, they could easily force this wooden door. To prevent this means of escape being taken advantage of, the roof should be raised to the height of the wall, and a flat gravel roof might be substituted for shingles, and if the front wall of the shed were built of brick, or with wood lathed and plastered, it could then be used in winter time for washing and bathing purposes, for which it is unfit in its present state. The bathing tub was in a very dilapidated conditon, and a new one is required. The Sheriff was requested to bring to the notice of the Council my recommendation regarding the shed; and also to direct attention to the necessity of pointing the outside walls of the gaol."

I instructed Mr. Mann to make the second inspection. He reported to me as follows:—

"As directed by you I made an inspection of the Barrie gaol on the 14th September. There were twenty-four prisoners in custody for various offences. Of that number, fifteen were men and nine women. The crimes and offences with which the men were charged are as under:—Murder, one; abortion, one; assault, one; selling liquor without license, one; drunkenness, three; vagrancy, four; three were insane, and one was detained under *capias*. Of the women, seven were under sentence for vagrancy, and one for selling liquor without a license. The ninth was a lunatic waiting removal to an asylum."

"The recommendations made by you upon the occasion of your last visit respecting the wash-room have not been carried out. The outside walls have lately been repaired, and are now in good order. A new bath tub is required, as the old one is worn out. The eave trough round the building is full of leaks and the water is damaging the walls at different points. A new one should be put up before the cold weather comes on. More bedsteads are also needed."

"The books are properly kept and the building is clean."

BERLIN GAOL.

	1884.	1885.	1886.
Prisoners committed during the year....	63	76	65
Greatest number confined at any one time.	11	10	12
Number of re-committals.....	13	16	23
Total cost of maintaining gaol.....	$1,535.33	$1,627.87	$1,657.49

A copy of the report made upon this gaol to the Government by Dr. O'Reilly is annexed:

"An inspection of the Berlin gaol was made by me on the 3rd June, when two male and one female prisoners were in custody.

"The gaol was clean and in good order, with the exception of the furnace to which attention had previously been called. It is in a very bad condition, and not only affects the safety of the building but, also, the health of the prisoners. I again called the attention of the authorities to the matter; also to the condition of the wall which separates the female airing court from the general yard. This wall has long been considered unsafe and in need of repair. I trust that both these matters will be at once attended to."

Dr. O'Reilly instructed Mr. Mann to make the second inspection. A copy of the report made by him is annexed:—

"As instructed by you I made an inspection of the Berlin gaol on the 10th August. Only two male prisoners were in custody. One was under sentence for a month for drunkenness, the other had been tried for embezzlement, found guilty and was waiting sentence.

"A contract for a new heating furnace has been let, and it will soon be placed in position.

"Nothing has yet been done to the fence between the women's and the work-yard.

"The books were properly kept, and the gaol was in a satisfactory condition."

BELLEVILLE GAOL.

	1884.	1885.	1886.
Prisoners committed during the year....	178	193	186
Greatest number confined at any one time	24	28	33
Number of re-committals.....	44	34	25
Total cost of maintaining gaol.....	$2,096.00	$2,165.00	$2,138.00

Copies of the reports made to the Government by me on this gaol are annexed:—

"On the 27th January, I inspected the Belleville Gaol, and saw all the prisoners in custody, namely, twenty-one males and seven females. Of the former, one was under sentence for burgalry, one for assault, and the others for minor offences. One had been committed as insane. One of the women was charged with arson; the others were undergoing short sentences for vagrancy, etc.

"The gaol and premises were clean and orderly throughout, and the books also were properly kept."

"I made a second inspection of the Belleville Gaol on the 14th September, and saw the twenty-two prisoners then in custody, namely, fifteen males and seven females. Of the males, there were two under sentence for trespassing, one for threatening to shoot, one for larceny, one for giving liquor to Indians, two for

drunkenness, and four were awaiting trial, one for forgery, one for larceny, two for highway robbery; the others were committed for drunkenness. There were also two of the males and two females held as lunatics; the remaining five females had been committed as vagrants.

"I found the gaol in its usual condition of good order, and the gaoler and his turnkey were evidently attentive to their duties; the books were also well kept."

BRANTFORD GAOL.

	1884.	1885.	1886.
Prisoners committed during the year....	175	157	233
Greatest number confined at any one time	27	21	36
Number of re-committals.....	90	73	94
Total cost of maintaining gaol.....	$2,960.80	$3,111.92	$3,010.46.

A copy of the report made to the Government upon this gaol by Dr. O'Reilly is annexed:—

"I made an inspection of the Brantford Gaol on the 5th May, when there were ten prisoners in custody, eight of whom were males and two females. One of the male prisoners was under sentence for burglary, one was waiting extradition, being charged with forgery in the United States; four were under sentence for larceny, one for vagrancy, and one for drunkenness; the two women were both under sentence for drunkenness.

"I found that the turnkey was away on leave of absence and the gaol was left in charge of the gaoler only, notwithstanding the fact that there were several prisoners of importance in custody. I informed the Sheriff that the gaol must never be left with less than two officials in charge of it, and that while it is desirable the gaoler and turnkey should have the requisite number of holidays during the year, a substitute for whoever might be absent, must always be provided."

"Some of the earth closets were not acting satisfactorily, there being considerable offensive odour from them. This arises either from the absence of proper deodorizing material in the closets, or from the fact that separators, which are most useful adjuncts, have not been placed in them. The attention of the county authorities has been called to this matter, and I trust that they will see that these closets are put into proper shape. In all other respects I found the gaol to be in a satisfactory condition.

The second inspection was made by Mr. Hayes, who reported to Dr. O'Reilly as under:—

"I beg to report that, acting under your instructions, I made the inspection of the Brantford Gaol on the 25th September. It was found to be in proper order throughout, and the yards were also in a well kept state. The gaoler was instructed to remove some old fencing which was in one of the yards. The top of the yard walls needs repairing; this should be done before winter, or the walls may be a good deal damaged by wet and frost. The want of a supply of good water is very much felt, and causes considerable inconvenience.

"Eight men were in custody, of whom seven were under sentence for drunkenness, vagrancy, etc., and one was detained under *capias*. One of the vagrants is an imbecile.

"Enquiry was made into the circumstances connected with the escape of prisoner John Sullivan on the 16th September. The facts are these: The prisoner, who was under sentence for three months (half of the time being served) for assaulting a constable, was taken out by the turnkey to draw water from a well

in the Court House grounds, the water in the wells in the gaol having been condemned as unfit for use. The prisoner, as soon as he reached the pump, dropped his pail and made a dash for his liberty; he outran the turnkey and has not since been heard of."

BRAMPTON GAOL.

	1884.	1885.	1886.
Prisoners committed during the year	151	186	247
Greatest number confined at any one time.	19	11	16
Number of re-committals	59	43	61
Total cost of maintaining gaol	$2,027.09	$1,696.23	$1,709.76

Instructions were given by Dr. O'Reilly to Mr. Mann of this Department to make the first inspection of this gaol. A copy of his report is annexed:—

"As instructed by you, I visited the Brampton gaol on the 6th August. There were three men and one boy in custody. One of the men had been committed for vagrancy, another as a lunatic, and the third for larceny. The boy is an idiot and is waiting removal to the asylum at Orillia.

"I examined the building throughout and found everything to be in a satisfactory state."

Dr. O'Reilly instructed Mr. Hayes to make the second inspection. He reported as follows:—

"I beg to state that, as directed by you, I inspected the Brampton gaol on the 7th October. The prisoners numbered five, two of whom were lunatics, one an idiot, and two were vagrants.

"All parts of the gaol were cleanly and neatly kept. The walls round the yard require pointing. If this work be not done at once, the walls will probably be much damaged.

"Iron bedsteads are needed to replace the old wooden contrivances now in use.

"The food supplies were examined and the quality thereof found to be good.

"The register was locked up in the Sheriff's office, and could not be got at. The other books of record were fairly well kept. Entries of frequent visits have been made in the Surgeon's book."

BROCKVILLE GAOL.

	1884.	1885.	1886.
Prisoners committed during the year	245	214	160
Greatest number confined at any one time.	30	31	33
Number of re-committals	119	114	82
Total cost of maintaining gaol	$2,663.51	$2,780.34	$2,645.70

Copies of the reports made by me to the Government upon this gaol are annexed:—

"The Brockville gaol was inspected by me on the 31st March, when twenty-two males and three females were in custody. Of the former, three had been committed as lunatics, seven were waiting trial for such offences as rape, robbery, abduction, larceny, etc. The others were serving short terms for minor offences. Of the women, one was waiting trial for larceny, and the others were under sentence for vagrancy.

"A case of smallpox made its appearance in this gaol last November, but owing to the prompt measures taken there was fortunately no spread of the

disease, and the whole building was subsequently thoroughly cleansed and disinfected. The white-washing and painting it has received give it a neat and healthful appearance.

"The books were well kept, but the register was in a dilapidated condition and should be rebound. The Sheriff was requested to have this done."

"I again inspected this gaol on the 25th September. There were thirteen prisoners in custody, eleven males and two females. Of the males, one was charged with attempting suicide, one was under sentence for larceny, and one was on remand, charged with a like offence. The other male prisoners were under sentence for vagrancy.

"Of the females, one had been committed and duly certified to as a lunatic, and the other was a vagrant.

"I found the premises well kept and in good order; the books also were neatly and correctly kept. In the female day-room the plaster of a portion of the ceiling is becoming detached, and in a dangerous condition; it should be repaired at once. The Sheriff was desired to call the attention of the Committee of Council to this matter, so that it may receive attention without delay. In other respects the building was in good repair."

CAYUGA GAOL.

	1884.	1885.	1886.
Prisoners committed during the year	68	110	125
Greatest number confined at any one time .	13	18	17
Number of re-committals	27	39	35
Total cost of maintaining gaol	$1,912.65	$2,342.89	$2,128. 1

A copy of the report made by Dr. O'Reilly to the Government upon this gaol is annexed:—

"Upon inspecting the Cayuga gaol on the 5th May, I found seven prisoners, six males and one female, in custody. Four of the males were vagrants and disorderly characters, and two were under sentence for embezzlement and assault respectively. The female was under sentence for frequenting a house of ill-fame.

"I regretted very much to learn that the gaoler, Mr. Murphy, was dangerously ill, and for some time past had not been able to perform his duties. The gaol, however, under the management of the turnkey, was found to be in a satisfactory condition throughout."

The second inspection was made by Mr. Hayes, who reported to Dr. O'Reilly as under:—

"As instructed by you I made an inspection of the Cayuga gaol on the 24th September. It was then in charge of the acting gaoler, a son of the late gaoler, Mr. Murphy, who died on the 17th September, after a little over ten years' service.

"There were six prisoners, all males, in custody. Of these, five were under sentence viz., three for drunkenness, one for assault and one for embezzlement. The other prisoner had been committed as being insane, but had not been finally examined; he appeared to be recovering. The prisoners were all seen and no complaint were made by them.

"The gaol and yards were in a clean and orderly state. The locks are in good condition.

"It was stated to me that the privy in the petty jury room is in a bad con-

dition, and at times taints the air in the gaol. The Sheriff has been asked to call the attention of the County Council to this matter."

CORNWALL GAOL.

	1884.	1885.	1886.
Prisoners committed during the year....	68	43	50
Greatest number confined at any one time.	9	7	13
Number of re-committals.....	14	10	12
Total cost of maintaining gaol	$1,800.05	$2,018.74	$1,520.52

Copies of reports made by me to the Government upon this gaol are annexed:—

"On the 31st March, I visited the Cornwall gaol. Only two prisoners were in custody, both males. One was charged with murder and the other was a lunatic.

"The structural alterations contemplated at the date of my previous visit, had been in progress for some time and were nearly completed. The work is substantial in appearance and the premises in point of security and utility will be much improved.

"The question of heating the gaol conjointly with the Court House, was discussed with the Chairman and members of the Committee of the County Council and two methods were proposed. The first was to place a hot water boiler in the basement room of the Court House, where the boiler used for heating the other sections of the building is; and the second to place the boiler for heating the gaol in a separate room in the basement somewhat nearer the line wall between the premises. I expressed the opinion that the latter method was the more desirable, inasmuch as the coal needed for the gaol would be kept separate from that used for heating the Court House, etc., and also as the distance between the boiler and the gaol would be lessened.

"The cells, corridors, etc., were in good order and the books properly kept."

"I made a second inspection of the Cornwall gaol on the 24th September, and found two male prisoners in custody. One was under sentence to the Reformatory for Boys for larceny, and the other was awaiting trial.

"I found the premises much improved since the completion of the recent alterations. All the apartments have boen cleaned and kalsomined throughout. The heating of the premises according to the plan referred to in my former report has not yet been undertaken, nor have closets in the yard been provided as was contempleted. I understand, however, that as a water supply is to be furnished to the town, the latter work has only been deferred with a view to having it done as soon as the water system can be made available."

COBOURG GAOL.

	1884.	1885.	1886.
Prisoners committed during the year....	127	137	96
Greatest number confined at any one time.	24	23	24
Number of re-committals.....	30	44	32
Total cost of maintaining gaol	$2,721.82	$3,454.40	$3,375.44

A copy of the report made by me to the Government upon this gaol is annexed:—

"The Cobourg gaol was inspected by me on the 13th April, when, of the fifteen male prisoners then in custody, two had been committed as insane,

three were charged with larceny, one with gaining access to bonded goods, one was detained for want of sureties to keep the peace; the others were under sentence for drunkenness, vagrancy, etc. The gaol and premises were in good order throughout, and the books correctly kept."

The second inspection was made by Mr. Mann, who reported to me as follows:—

"As instructed by you I inspected the Cobourg gaol on the 20th September. There were in custody ten men and three women. The male prisoners had been committed for the following offences, viz., forgery, three; false pretences, two; stabbing, one; vagrancy, one; larceny, one; digging up a corpse, one; and one man was insane; the three women were all lunatics.

"The building was found in a satisfactory state, and the books were properly kept."

CHATHAM GAOL.

	1884.	1885.	1886.
Prisoners committed during the year	153	121	103
Greatest number confined at any one time.	16	18	16
Number of re-committals	9	7	7
Total cost of maintaining gaol	$2,032.21	$2,178.78	$2,308.05

A copy of the report made to the Government upon this gaol by Dr. O'Reilly is annexed:—

"An inspection of the Chatham gaol was made by me on the 15th May, when there were six prisoners,—three males and three females, in custody. One of the males was waiting trial for forgery, one was under sentence for assault, and one for drunkenness; one of the females was a lunatic, the other two were vagrants.

"The gaol and premises were found to be in a very satisfactory condition."

GODERICH GAOL.

	1884.	1885.	1886.
Prisoners committed during the year	90	61	62
Greatest number confined at any one time	18	15	17
Number of re-committals	34	27	18
Total cost of maintaining gaol	$2,610.22	$2,461.39	$2,161.54

A copy of the report made to the Government upon this gaol by Dr. O'Reilly is annexed:—

"The Goderich gaol was inspected by me on the 12th May, when there were seven male and three female prisoners in custody. Three of the male prisoners were insane, (one of them 90 years of age), three were vagrants, and one was under sentence for illicit distillation; of the female prisoners, one was insane, and the other two were vagrants.

"On a previous occasion, I called attention to the fact that inasmuch as this gaol is heated by stoves, proper guards should be placed over them to prevent accidents. I now find that one, and only one, of the stoves has been properly guarded. At this visit there was brought under my notice a prisoner who is subject to epilepsy, and who had in a fit fallen against one of the unprotected stoves, and had been burnt in a most shocking manner. The attention of the gaol Committee was again called to this matter, and I gave instructions that these stoves were not to be put in use until properly protected, and if the gaol Committee failed

to do the work, it was to be done by the Sheriff at the expense of the County. It was also pointed out to that official that if he failed to have the stoves guarded he would be held personally responsible for any accident which might take place, for want of this protection.

"The attention of the gaol Committee was also called to the damp and otherwise unsanitary condition of the gaoler's house. I was informed that in consequence of the bad drainage and the absence of sunlight upon this house, there has been a great deal of ill health in the gaoler's family. I have before asked that this may be remedied, and I repeated the request in the hope that the matter would receive attention at the next meeting of the County Council.

Dr. O'Reilly instructed Mr. Hayes to make the second inspection. A copy of his report is annexed:—

"As instructed by you, I made an inspection of the Goderich gaol on the 9th October. I found that guards had been placed over the stoves as directed, but nothing had been done to improve the gaoler's quarters. Some repairs to the entrance to the gaol were being made at the time of my visit. The building was in fairly good order. The bread, oatmeal, etc., supplied to the prisoners were seen and found to be of good quality. The water supply arrangements are defective and the drainage of the gaol is not good.

"There were eight prisoners in custody, five of whom were males and three females. Of these prisoners, four had been committed as dangerous lunatics, but three are old chronics who could be cared for in a poorhouse. The other had only be committed the day before my visit, and had not been examined by the gaol surgeon, etc. Of the other prisoners, three were under sentence for vagrancy, and one for larceny."

GUELPH GAOL.

	1884.	1885.	1886.
Prisoners committed during the year....	147	118	87
Greatest number confined at any one time.	18	18	16
Number of re-committals.....	23	11	19
Total cost of maintaining gaol.....	$2,677.03	$1,900.36	$2,221.24.

A copy of the report made to the Government by Dr. O'Reilly on this gaol is annexed:—

"The Guelph gaol was inspected by me on the 3rd June. It then contained seven prisoners—four males, and three females. Of the males, one was charged with placing obstructions on the railway. He had been recently arrested, and there is a suspicion that he is insane. This question will be settled in due course. Another was under sentence for embezzlement; another was waiting trial for incest, and the fourth was a lunatic. Of the three women, one was waiting trial for child murder; one was insane, and the other a vagrant. The latter spends nearly her whole time in gaol, and is a case of old standing,"

"On the occasion of this visit, I had an interview with the gaol surgeon and the gaol Committee of the County Council, on the subject of the heating of the female side of this gaol. Attention had repeatedly been called to the very unsafe condition of this part of the gaol, but no action having been taken, I felt it my duty to urge very strongly upon the Committee the importance of applying the proper remedy. The safety of the female prisoners is so far endangered by the present mode of heating, that it ought not to be allowed to continue, more especially as serious accidents have arisen from the same cause elsewhere. I represented to the Committee the desirability and importance of taking steps, to have not only the

part in question, but the whole of the gaol heated with hot water, thus ensuring the greater safety of all the prisoners, as well as more cleanliness and economy. The gaol premises were otherwise in their usual condition of good order."

The second inspection was made by Mr. Hayes, who reported to Dr. O'Reilly as under:—

"In accordance with your instructions, I visited the Guelph gaol on the 8th of October. You will be pleased to learn that it has been decided to heat the gaol with hot water. The work of putting in the necessary apparatus was going on at the time of my visit, and it is expected that by the end of the month all will be completed. The city water is also being brought into the gaol.

"In consequence of the works in progress, the gaol was not as neat nor as clean as it might have been. The upper portion of the yard walls require repairing in different places."

"There were five men and three women in custody; two had been committed as lunatics and one as an idiot. Two were waiting trial for assault and infanticide respectively, the others were under sentence. The books are very well kept. The bread, meat, etc., were seen and the quality appeared to be good."

HAMILTON GAOL.

	1884.	1885.	1886.
Prisoners committed during the year	954	1,003	953
Greatest number confined at any one time	62	63	66
Number of re-committals	524	562	483
Total cost of maintaining gaol	$5,170.00	$5,706.36	$6,920.87.

Copies of the reports made by Dr. O'Reilly to the Government upon this gaol are annexed:—

"I inspected the Hamilton gaol on the 8th July. There were on that day thirty-eight male and ten female prisoners in custody. Two of the male prisoners were on remand on a charge of rape, seven were waiting trial, namely: four charged with burglary, two with forgery, and one with murder; all the others were under sentence for various periods for minor offences. Of the female prisoners, two were insane, and the others were vagrants and disorderly characters.

"The gaol was found to be in a very satisfactory condition throughout, and the books well kept."

"The Hamilton gaol was again inspected by me on the 8th November, when I found twenty-seven prisoners in custody, twenty-one being males and six females. This is the smallest population that I have ever found in this gaol, and I hope that decreased commitments will continue to be the rule.

"I made a general inspection of the gaol premises, and found them to be in good order. The beds and bedding were clean and properly made up. The drainage and ventilation of this gaol are good. It is a pity that water-closets have not been provided, as the want of them is much felt.

"The food supplies were examined and found to be of proper quality and distributed in accordance with the regulations."

KINGSTON GAOL.

	1884.	1885.	1886.
Prisoners committed during the year	176	184	157
Greatest number confined at any one time	28	33	23
Number of re-committals	28	26	16
Total cost of maintaining gaol	$5,134.33	$3,477.74	$4,344.43.

Copies of the report made by me to the Government upon this gaol are annexed:—

"I inspected the Kingston gaol on the 1st of April, and saw all the prisoners therein, viz., seven males and two females. Of the former, four were lunatics; one was under sentence for larceny, and the others for drunkenness and vagrancy."

"The premises were well kept. They had just received the usual spring cleaning, and the walls had been kalsomined and whitewashed. The driving storm which had occurred a few days previous to my visit had, however, very much discoloured the walls by saturation. About twenty feet of the gaol wall had fallen down. I was assured that it would be repaired so soon as the weather was favourable.

"The books were in their usual condition of neatness and good order."

"I made a second inspection of the Kingston gaol on the 9th September, and saw all the prisoners then in custody, namely, eight males and four females. Of the males, three were committed, charged with being insane; one was committed for larceny, and four were under sentence, viz., one for carrying fire-arms and three for drunkenness. The females were all under sentence for vagrancy.

"I found the gaol and premises in excellent order. The portions of the walls formerly noted as being discoloured by water having saturated through during heavy storms, had been thoroughly cleaned and whitewashed, so that internally the gaol appeared to advantage. One of the division walls, also referred to in my last inspection as being broken down and damaged by frost, was being rebuilt, and when completed the enclosures will be in first-class condition.

"A force pump has been placed in the kitchen to supply water for the closets, etc., which, besides improving the sanitary conditions of the gaol, will furnish the prisoners with some employment.

"I found the books in good order as usual."

London Gaol.

	1884.	1885.	1886.
Prisoners committed during the year....	1,004	788	801
Greatest number confined at any one time	77	68	58
Number of re-committals.....	382	367	394
Total cost of maintaining gaol.....	$7,517.35	$6,996.71	$7,768.75

A copy of the report made to the Government upon this gaol by Dr. O'Reilly is annexed:—

"My first inspection of the London gaol during the official year was made on the 25th March. There were on that date thirty-one prisoners in custody—twenty-one males and ten females. None of the prisoners were committed for any very serious offence. They had been convicted of petty larceny, assault, drunkenness, vagrancy, etc. One was confined as a lunatic, but I did not consider the case to be suitable one for transfer to an asylum. Steps are therefore being taken for the admission of the prisoner to the county poorhouse. Eight of the female prisoners were vagrants; the other two were lunatics, old and well known cases.

"I had the pleasure, on this occasion, of meeting Miss Doyle for the first time since her appointment as matron in succession of her mother, who for so many years filled that office with the highest efficiency. Judging from the condition in which I found the female department, this side of the gaol will be managed with the same efficiency that distinguished the late matron's management.

"The gaol throughout was found to be thoroughly clean and well kept in all respects. This is the more creditable when the character of the building and the

great difficulty in keeping it in good order are considered. The task is certainly no ordinary one, but it could be made much easier if, instead of the very unsatisfactory bedsteads now in use, proper iron bedsteads were provided. I would strongly urge upon the County Council the desirability of remedying this defect at the earliest opportunity.'

LINDSAY GAOL.

	1884.	1885.	1886.
Prisoners committed during the year	75	71	54
Greatest number confined at any one time	17	12	19
Number of re-committals	6	6	4
Total cost of maintaining gaol	$1,718.54	$1,687.89	$1,503.77.

A copy of the report made by me upon this gaol is annexed:—

"My first inspection of the Lindsay gaol during the year was made on the 27th May. Three males and one female were in custody. Two of the former were vagrants, and one was serving a short term for larceny. Both the females were vagrants.

"The premises were in proper order and the books correctly kept."

I instructed Mr. Mann to make the second inspection. A copy of his report to me is annexed:—

"An inspection of the Lindsay gaol was made by me on the 4th September. There were eight men and one woman in custody. Of the former, two had been committed for burglary, one for larceny, three for vagrancy, and two were lunatics awaiting removal to an asylum. The women had been committed for vagrancy.

"The books were entered up and properly kept. The gaol premises were clean and in good order."

L'ORIGNAL GAOL.

	1884.	1885.	1886.
Prisoners committed during the year	23	28	20
Greatest number confined at any one time	7	9	5
Number of re-committals	4	1	4
Total cost of maintaining gaol	$1,063.62	$1,007.66	$1,085.01

A copy of the report made by me to the Government upon this gaol is annexed:—

"An inspection of the L'Orignal gaol was made by me on the 23rd September, when there were three prisoners in custody, namely: one male charged with stabbing, one female charged with murder, and one committed as an idiot.

"The corriders, cells and bedding were strictly clean, and the entire premises were in good condition. The books also were found to be kept in proper order, and shewed that nineteen prisoners had been in custody during the official year, up to the date of my visit."

MILTON GAOL.

	1884.	1885.	1886.
Prisoners committed during the year	140	252	373
Greatest number confined at any one time	21	22	26
Number of re-committals	17	55	70
Total cost of maintaining gaol	$1,287 00	$1,407.30	$1,398.39.

The first inspection of this gaol during the official year was made by Mr. Hayes, a copy of whose report to Dr. O'Reilly is annexed:—

"As instructed by you, I made an inspection of the Milton gaol on the 5th January. I found it to be clean and well kept throughout.

"There were in custody, eleven men and one woman. Nine of the men were under sentence for vagrancy, one was committed for attempting suicide. He is said to be of unsound mind. The other man had been tried for horse stealing but acquitted on the ground of insanity. The female prisoner is insane, but her case is not an urgent one.

"The fence referred to in previous reports has been completed.

"The gaoler does not appear to give rigid adherence to the latter part of Rule No. 18; he has been desired to obey it for the future. The matron, too, should always retain in her custody the keys opening the doors leading to the female wards."

The second inspection of this gaol was made by Dr. O'Reilly himself, a copy of this report to the Government is annexed:—

"The Milton gaol was inspected by me on 23rd April, when there were in custody thirteen prisoners—twelve males and one female. Of the male prisoners, one was waiting trial for indecent assault, one had been arrested for horse-stealing, but as he was found to be a person of weak mind, he was acquitted of the charge. All the others were vagrants. The one female prisoner was an aged insane woman."

"The gaol was in its usual condition of thorough cleanliness and order, except in those parts of it where the spring whitewashing was going on. So far as neatness and cleanliness go, there is no better kept gaol in the Province, but the fact that there is no kitchen, and that one of the corridors has to be appropriated for that purpose, is a great draw back, especially during the winter when the gaol is often overfull. It would be a great advantage if the County Council would build a kitchen and thus avoid the necessity for using the corridor.

"I found the books all in good shape, except some deficiencies in the surgeon's visiting book, to which I called attention.

"The number of commitments to this gaol since the beginning of the official year on the 1st of October, is 328. Of these only three were directly connected with strong drink; one of the three being for a violation of the Scott Act and the and the other two for drunkenness. Two prisoners were charged with rape; seven with larceny; one with throwing stones through a car window, and six were committed as tramps. These nineteen prisoners belonged to the County, the remaining 309 were tramps from other localities who were committed to the gaol, some simply for lodgings and others for short sentences."

Napanee Gaol.

	1884.	1885.	1886.
Prisoners committed during the year.....	72	59	48
Greatest number confined at any one time.	9	11	8
Number of re-committals.....	26	19	18
Total cost of maintaining gaol.....	$1,485.56	$1,863.19	$1,555.96.

Copies of the reports made by me upon this gaol are annexed:—

"My first inspection of the Napanee gaol during the official year was made on the 12th April, when there were four male prisoners in custody. One was under sentence for assault, and the other three for vagrancy.

"The gaol was in good order throughout and the books properly kept."

"I made a second inspection of the Napanee gaol on the 8th September, and saw the seven male prisoners then in custody. Two had been committed as insane; two for larceny; two for vagrancy, and one for contempt of court.

"The premises internally were in good order, the beds and bedding clean and neat, the corridors and cells were also well kept. The yards, however, were not so tidy, as the grass and weeds required cutting.

"Some delay had occurred in making full entries in the books, which were otherwise well kept."

OTTAWA GAOL.

	1884.	1885.	1886.
Prisoners committed during the year.....	713	637	712
Greatest number confined at any one time.	47	65	46
Number of re-committals.....	97	80	85
Total cost of maintaining gaol.....	$6,351.10	$5,576.46	$5,814.11

Copies of the reports made by me to the Government upon this gaol are annexed:—

"I visited the Ottawa Gaol on the 6th May. There were then fifteen males and five females in custody. Two of the former were fully certified to be insane; one was under sentence for larceny; three for assault, and the others for drunkenness. Of the females, two were committed as insane; one for assault, and the others for minor offences.

"The gaol and premises were in excellent order. Considerable improvement had been made by levelling and sodding the working-yard. In addition to the work thus provided for the prisoners, a large quantity of stone had been quarried and broken.

"The order and discipline of the gaol were most creditable, and the routine work was evidently being well attended to.

"I made another inspection of this gaol on the 21st September, when there were twenty-three prisoners in custody, namely: sixteen males and seven females. Two of the males had been committed as insane, one of whom was fully certified to; three were under sentence for assault, one for larceny, one for vagrancy, and two for drunkenness: of those awaiting trial one was charged with manslaughter, one with forgery, one with larceny, one with horsestealing, and one with assault. Two were on remand; one charged with larceny, and one with feloniously damaging an animal. Of the females, two had been committed as insane, one had been committed charged with child murder, and four were under sentence for short terms for being drunk and disorderly. Upon an examination of the record, I found that during the official year ending 30th September, 1885, 637 prisoners had been in custody, and that during the present year up to the date of my visit, 687 had been committed, showing an increase of fifty, and this number will no doubt be added to before the close of the official year. The books were properly kept, and the premises generally were in good order. The corridors and cells were clean and tidy, with the exception of the bedding in two cells which required cleaning. Several improvements have been made during the summer. The floor of the punishment ward has been cemented, and new floors have been laid in the dining-hall, corridor and in ward No. 2. These were required and the work has been satisfactorily done."

OWEN SOUND GAOL.

	1884.	1885.	1886.
Prisoners committed during the year....	200	228	200
Greatest number confined at any one time.	27	37	42
Number of re-committals.....	72	83	60
Total cost of maintaining gaol.....	$3,467.54	$3,540.75	$3,880.05

Dr. O'Reilly instructed Mr. Hayes to make the inspections of this gaol. Copies of his reports are annexed:—

"As instructed by you, I inspected the Owen Sound gaol on the 11th August. The turnkey was in charge, as the gaoler was away on leave. A man to assist the turnkey had been appointed temporarily. The premises were clean and in good order. A few iron bedsteads of the swinging pattern have been supplied. If it be the intention to furnish every cell with an iron bedstead, I would recommend that one or two cells in each ward be furnished with the ordinary bedstead on legs, as those swung to the walls with iron chains and hooks are dangerous for use by lunatics. Under any circumstances, it would be well to have the chains fastened to the walls by round staples instead of by open hooks.

"It is stated that the wall bounding one side of the turnkey's yard and which runs from the wall of the Court House to the wall of the working-yard, is used by friends of prisoners as a means by which they can communicate with those inside the gaol. The use of the wall as a means of reaching the gaol premises could be stopped by the building on it of a tower the diameter of which would be greater than the width of the wall.

"The prisoners numbered sixteen—fourteen men and two women; of these no less than three (two men and one woman), were waiting trial for murder. Two of the men were insane. The majority of the others were under sentence for vagrancy.

"The books were well kept."

"As instructed by you, I again visited the Owen Sound gaol on the 14th October.

"There were seventeen prisoners in custody—thirteen males, four females. With the exception of a woman waiting trial for murder, these prisoners had been committed for minor offences. The prisoners were all seen. No complaints were made by them.

"The books are well kept. The Surgeon makes frequent visits.

"The gaol, generally, was in good order."

ORANGEVILLE GAOL.

	1884.	1885.	1886.
Prisoners committed during the year....	56	63	57
Greatest number confined at any one time.	16	27	28
Number of re-committals.....	16	30	30
Total cost of maintaining gaol.....	$1,972.89	$2,160.30	$2,296.00

Dr. O'Reilly instructed Mr. Hayes to make the inspections of this gaol. Copies of his reports are annexed:—

"I beg to report that, as instructed by you, I made an inspection of the Orangeville gaol on the 12th August. There were then in custody five male and five female prisoners, all of whom, except two, were under sentence for vagrancy. The exceptions were a male idiot and a woman committed as a lunatic. She is a quiet chronic and not a proper case for an asylum.

"The fence around the woodyard is in a worse condition than ever and is a disgrace to the building. The steps from the yard down to the kitchen are also in a very dilapidated condition and should be repaired. In other respects, the gaol and its surroundings were in good order."

"I beg to state that, as instructed by you, I made a second inspection of the Orangeville gaol on the 13th October. I found it to be in good order throughout. The food supplies were examined and found to be of proper quality.

"The prisoners—five males and five females—are those whom I found in custody on the 12th August. Two prisoners were committed since the 1st October, but both had been discharged before my visit.

"The books are fairly well kept. The gaol surgeon has only recorded four visits since the 12th August."

PERTH GAOL.

	1884.	1885.	1886.
Prisoners committed during the year	70	86	82
Greatest number confined at any one time	20	25	34
Number of re-committals	24	28	20
Total cost of maintaining gaol	$2,617.07	$2,830.82	$2,366.65

A copy of the report made to the Government by me upon this gaol is annexed:—

"I visited the Perth gaol on the 4th May, finding seven males and three females in custody. One of the males had been committed as a lunatic and one of the females as an idiot. All the other prisoners, both male and female, were vagrants. From the records it appeared that during the winter a large number of men, who were without employment, had been committed to gaol for terms varying from two to four months, and I learned that they had been kept busily at work breaking stone. At the time of my visit, however, they had all been discharged, and those men whom I found in custody were old and infirm and unable to make much physical effort.

"The official visits of the gaol surgeon were fully recorded in the register and the frequency of the entries showed that the prisoners had received extra attention during the period the gaol was overcrowded.

"The gaol and premises were in excellent order and scrupulously clean."

I instructed Mr. Mann to make the second inspection. He reported to me as under:—

"The Perth gaol was inspected by me on the 2nd September. There were eleven males and four females in custody. The former had been committed for the following offences, viz:—Assault, four; larceny, one; vagrancy, four; insanity, two; of the females, two were insane; one is an idiot and the other was a vagrant.

"The gaol is undergoing a thorough cleaning from top to bottom, and from present appearances everything will be in a satisfactory shape in a few days. The books were entered up and neatly kept."

PICTON GAOL.

	1884.	1885.	1886.
Prisoners committed during the year	65	69	80
Greatest number confined at any one time	6	6	10
Number of re-committals	28	30	37
Total cost of maintaining gaol	$1,079.97	$1,255.35	$1,208.80.

A copy of the report made by me to the Government upon this gaol is annexed:—

"I inspected the Picton gaol on the 15th September, and found no prisoners in custody."

"The wards, corridors, cells, etc., were in an excellent state of cleanliness and order. The yards, however, looked somewhat neglected. The books were in proper order and well kept."

PEMBROKE GAOL.

	1884.	1885.	1886.
Prisoners committed during the year.....	113	131	72
Greatest number confined at any one time.	20	25	19
Number of re-committals.....	43	37	27
Total cost of maintaining gaol	$1,732.07	$1,955.87	$1,726.72

Copies of the reports made to the Government by me upon this gaol are annexed:—

"My first statutory visit to the Pembroke gaol during the official year was made on the 5th May. The prisoners numbered four men and three women. Of the former, two were under sentence and one was waiting trial for larceny, and one was a vagrant. Two of the women were vagrants and the third was insane.

"Reference to the register showed me that from the beginning of the official year to the 30th of April, the commitments numbered forty-four, against eighty-nine in the corresponding period of the previous year, or a falling off of forty-five. A further examination shewed me that during the six months just ended, no commitments had been made for drunkenness nor disorderliness, against twenty-two commitments during the previous year.

"The premises were in excellent order throughout and the books properly entered up."

"I made a second inspection of the Pembroke gaol on the 22nd September.

"There were eleven prisoners in custody—eight males and three females. Of the former, two were under sentence for selling liquor; one for larceny; one for frequenting a house of ill-fame; two for vagrancy; one had been committed as a lunatic, and one boy as an idiot. Of the females, one was under sentence for keeping a house of ill-fame, and two for vagrancy. I found the premises in good order, neat and clean; the books also were well kept, but the register was in a dilapidated condition and requires rebinding, it will be well to separate the part already filled up from that to be used—making two volumes of it.

"The supply of blankets for gaol use is insufficient and requires renewing to the extent of a dozen pairs; the Sheriff has been directed to make a requisition upon the Committee of Council for them. The repointing of the gaol walls was being proceeded with; this work was necessary in order to keep them in a satisfactory state of repair. The portion of the roof covering the turnkey's apartments and office was also being relaid, and, so far as completed, the work appeared to be satisfactorily done."

PETERBOROUGH GAOL.

	1884.	1885.	1886.
Prisoners committed during the year....	148	120	106
Greatest number confined at any one time.	25	19	28
Number of re-committals.....	48	29	24
Total cost of maintaining gaol.....	$2,580.98	$2,519.58	$2,899.49.

A copy of the report made by me to the Government upon this gaol is annexed:—

"The Peterborough gaol was inspected by me on the 27th May. It then contained nine prisoners—eight males, one female. Four of the males had been committed as insane, two as vagrants, and two were waiting trial on charges of forgery and burglary respectively. The female prisoner had been committed as a vagrant.

"The gaol and premises were in excellent order. The cells and corridors have in the greater part been repainted, and the sanitary condition of the gaol seems to be excellent.

"The books were well kept, and there was a general indication of thorough attention to their work on the part of the gaoler and turnkey."

The second inspection was made by Mr. Mann, who reported to me as under:—

"As instructed by you I visited the Peterborough gaol on the 3rd September. On that day there were eleven male prisoners confined in the gaol for the following offences, viz.: larceny, one; bigamy, one; breach of the peace, one; vagrancy, one; want of sureties, one; insanity, five.

"I examined the books, which are properly kept, also the gaol building, which was quite satisfactory. The gaol is about to be connected with the town water supply system, and the gaoler's quarters, which at present are inconvenient, are to be reconstructed. When completed, these improvements will be of great benefit to the gaol premises."

SIMCOE GAOL.

	1884.	1885.	1886.
Prisoners committed during the year	81	74	95
Greatest number confined at any one time	11	72	16
Number of re-committals	29	28	17
Total cost of maintaining gaol	$1,795.03	$1,657.39	$1,607.85

A copy of the report made to the Government upon this gaol by Dr. O'Reilly, is annexed:—

"The Simcoe gaol was inspected by me, on the 5th May. There were only two prisoners in the custody; one a male idiot who has been in the gaol for a long time, and the other a female waiting trial for larceny.

"The gaol was in proper order throughout."

The second inspection was made by Mr. Hayes, who reported to Dr. O'Reilly as follows:—

"In accordance with your instructions, I made an inspection of the Simcoe gaol on the 24th September. Four males were in custody; two are idiots, one was waiting trial for rape, and one was under sentence for vagrancy. The last named is a boy of twelve years of age, who has no parents nor relatives, and is not only in danger of getting into bad habits, but of starving during the coming winter. The attention of the County Judge should be called to this boy's case, with a view to his commitment to the Reformatory. There was also a young girl in custody, who was detained as a Crown witness against the man committed for rape.

"The gaol, as usual, was in a clean and orderly condition. The books are well kept."

ST. CATHARINES GAOL.

	1884.	1885.	1886.
Prisoners committed during the year....	97	99	117
Greatest number confined at any one time	15	15	18
Number of re-committals.....	7	9	9
Total cost of maintaining gaol	$2,666,70	$2,791.04	$3,054.65

A copy of the report made to the Government upon this gaol by Dr. O'Reilly is annexed :—

"I inspected the St. Catharines gaol on the 4th of May. There were then seven prisoners in custody, all males; two were under sentence for petty larceny, and one for vagrancy, one was waiting trial, and three were lunatics; of the latter, two will be removed to an asylum.

"The gaol was in its usual excellent condition."

Instructions were given to Mr. Hayes to make the second inspection. He reported to Dr. O'Reilly, as under:—

"As directed by you, I made an inspection of the St. Catharines gaol, on the 23rd September. The prisoners numbered eleven, ten men, and one woman, an idiot Three of the men were under sentence for drunkennesss, two for vagrancy, one for abduction, and one for assault; the remaining three were insane. Whilst I was in the gaol, two of these lunatics started for Hamilton Asylum, in the care of a Provincial Bailiff. The prisoners were all seen, and no complaints were made by them.

"The gaol throughout was in very good order, and the yards were in a similar condition. The books are well kept. No punishment has been recorded for five years."

SARNIA GAOL.

	1884.	1885.	1886.
Prisoners committed during the year....	295	342	278
Greatest number confined at any one time	22	23	36
Number of re-committals	21	5	4
Total cost of maintaining gaol	$3,334.75	$3,343.79	$3,531.08

A copy of the report made by Dr. O'Reilly to the Govermnent upon this gaol is annexed :—

"On the occasion of my inspecting the Sarnia gaol, on the 13th May, there were seventeen male prisoners in custody. Three of the prisoners were insane, one was waiting his trial for horse stealing, three were under sentence for petty larceny, one was waiting trial for burglary and arson, and one was a debtor.

"The gaol was found to be in a thoroughly clean and orderly condition, with the exception of the water closets, which were not working satisfactorily. I called the attention of the Gaol Committee to this matter, with a request that the closets might be examined, and put into proper condition. I am of opinion, however, that this cannot be done without an entire renewal of the closets. I also suggested as another necessity, the building of a wall around the outer yard. It is hardly fair to hold the gaol officials responsible for the safe custody of prisoners employed in this yard, when the necessary protection is not afforded. I further recommended the substitution of iron bedsteads for the wretched wooden arrangements now in use. In this respect the gaol is very far behind the times, but a trifling expenditure would remedy the defect."

STRATFORD GAOL.

	1884.	1885.	1886.
Prisoners committed during the year	155	151	148
Greatest number confined at any one time	16	22	19
Number of re-committals	54	51	56
Total cost of maintaining gaol	$2,225.21	$2,460.49	$2,129 75

A copy of the report made to the Government by Dr. O'Reilly upon this gaol is annexed:—

"An inspection of the Stratford gaol was made by me on the 13th May The prisoners then in custody, numbered twelve males and one female. Of the former, one was insane, five were under sentence for burglary, receiving stolen goods, embezzlement, assault, and contempt of court respectively, and six were vagrants. The female prisoner was an aged and infirm woman, demented, and was in gaol for shelter.

"The gaol and all its belongings were found to be in their usual clean and orderly condition."

SANDWICH GAOL.

	1884.	1885.	1886.
Prisoners committed during the year	258	202	173
Greatest number confined at any one time	31	27	24
Number of re-committals	45	70	48
Total cost of maintaining gaol	$4,484.64	$2,822.00	$4,321.62

A copy of the report made upon this gaol to the Government by Dr. O'Reilly is annexed:—

"On the 14th of May I inspected the Sandwich gaol, when twelve male and four female prisoners were in custody; of the former, one was waiting trial for fraud, one was remanded, charged with highway robbery, one was under sentence to the Central Prison for larceny, one was an idiot and the others were drunkards. Of the women, two were insane, one is an idiot and one was waiting trial charged with murder.

"I was pleased to find that since my last visit to the gaol it had been improved very much. Proper catches have been fitted to the corridor gates, which will prevent such a catastrophe as that which led to the murder of the late gaoler, and in many respects there has been a satisfactory upward tendency in the condition of the gaol. I never saw it in so good a condition as it was on this occasion."

ST. THOMAS GAOL.

	1884.	1885.	1886.
Prisoners committed during the year	267	208	126
Greatest number confined at any one time	27	25	23
Number of re-committals	96	67	48
Total cost of maintaining gaol	$2,618.04	$2,723.22	$2,172.34

A copy of the report made to the Government upon this gaol by Dr. O'Reilly is annexed:—

"An inspection of the St. Thomas gaol for the official year was made by me on the 11th March.

"On the 23rd February, the County Architect sent me a set of plans for the erection of a gaol kitchen, laundry turnkey's room, store-room, gaoler's kitchen

etc., for approval, this work being an instalment of a general scheme of gaol enlargement which I had recommended to the County authorities in the year 1884.

"Not finding these plans very satisfactory in respect to the safety of the prisoners, economy of management, and some other minor points, I had a modified plan prepared under the supervision of the Chief Architect of the Department of Public Works, and visited St. Thomas on the 11th March to confer with the County Architect on the subject of the proposed works.

"On this occasion I inspected the gaol and found it—as is almost always the case—overcrowded on the male side, there being thirteen male prisoners with only twelve cells to accommodate them. Indeed there are practically only eleven cells for male prisoners in this gaol, as owing to the entire absence of any place for the keeping of bedding and other bulky stores, the gaoler is obliged to use one of the cells for that purpose.

"On this occasion I made a special examination of the gaol registers for the whole of the past year (1885), with a view to ascertaining the number of days during the year on which the accommodation of the gaol was inadequate for the number of prisoners confined. I found that taking twelve male prisoners as the maximum number that the gaol can properly contain, there were on 196 of the 365 days in the year more prisoners than cells, and therefore only 169 days on which the gaol was equal to the demands upon it.

"On two days of the year 1885 there were no less than twenty-five prisoners in the gaol; on two days there were twenty-four; on thirteen days there were twenty-three; on ten days there were twenty-two; on eleven days there were twenty-one; on eighteen days there were twenty; on forty days there were nineteen; on twenty-six day there were eighteen; on twenty-four days there were seventeen; on thirty-eight days there were sixteen; on fourteen days there were fifteen; on thirty days there were fourteen; on twenty-nine days there were thirteen; and on forty-nine days there were twelve prisoners. For the balance of the year there were not more prisoners in the gaol than there are cells.

"The evils to the health and morals of the prisoners and the discipline of the gaol which may arise from this condition of things need not be enlarged upon; they are sufficiently apparent to anyone at all conversant with such matters.

"The enlargement of the gaol which is now proposed will afford some much needed relief to the other departments of the gaol economy, but will not be of any service at all in respect of the more efficient accommodation of prisoners. There will be a gaol kitchen, laundry, turnkey's room, store-rooms, etc., which the gaol has never had before and these will add much to the general efficiency of its operations.

"I desired the Architect to call the attention of the gaol committee to the necessity, in connection with these proposed additions, for a proper wall to surround the work-yard on the west side of the gaol. At present, this yard, where all the outside operations of the gaol will be carried on, has only a common low fence surrounding it which affords no security whatever against the escape of prisoners, nor does it screen them from outside observation. Indeed it would be unreasonable to hold the gaoler or turnkey responsible for the escape of any prisoner from this yard, should such an event unfortunately occur, so inadequate is the security it affords.

"Of the 13 male prisoners in the gaol on the day of my visit, one was waiting trial for murder, one for horse stealing, and one for larceny, one was a debtor, and one was insane. All the others were under short sentences for various minor offences, such as assault, trespass, drunkenness, etc.; two of them were quite young lads, but all were herded together without any possibility of classification.

"There were three female prisoners in custody—one insane, one waiting trial for threatening, and one, a girl of fourteen years, under sentence for petty larceny. These were all necessarily confined in the one corridor of the gaol available for female prisoners.

"I found the gaol, so far as could reasonably be expected in its crowded state, clean and in good order throughout, and the management in all its departments in a very satisfactory condition."

SAULT STE. MARIE GAOL.

	1884.	1885.	1886.
Prisoners committed during the year	37	43	35
Greatest number confined at any one time	12	13	13
Number of re-committals	1	2	2
Total cost of maintaining gaol	$1,434.12	$1,617.28	$1,969.78

A copy of the report made upon this gaol to the Government by Dr. O'Reilly is annexed:—

"An inspection of the Sault Ste. Marie gaol was made by me on the 21st August. There were four prisoners in custody—three males, one female. Two of the former were under sentence for larceny, and the third, an Indian, was said to be insane. The woman was under sentence for keeping a disorderly house.

"The gaol was found to be well kept in all respects, and the books were in a like condition.

"The erection of the recently completed residence for the gaoler provides a much more satisfactory arrangement for his family, as they formerly occupied the basement of the Court House. There is now a separate kitchen for the gaol, so that it is no longer necessary to use a kitchen in common for the gaoler's family and the prisoners.

"In view of the fact that a considerable increase in the commitments to this gaol is expected in consequence of the large railway works which are soon to be commenced in the locality, it seems necessary that arrangements should be made in time to meet the demand so far as it is possible to do. With this object in view, certain improvements can be made in the unoccupied portion of the Court House basement, by strengthening the windows and doors, so that five or six prisoners of the less important class could be accommodated therein. A recommendation to this effect will be made to the Public Works Department; also that 200 feet of one-inch hose be furnished, for attachment to the force pump for fire and cleansing purposes.

"A tile drain is also required to carry off the sewage, the present arrangements being unsatisfactory. Some repairs and alterations to the fence will likewise be necessary, in order to adjust the yards to the new conditions arising from the erection of the gaoler's house.

"The house just referred to is satisfactory in every respect, except the concreting in the cellar, which was not well done, and will have to be done over again and the drainage perfected."

TORONTO GAOL.

	1884.	1885.	1886
Prisoners committed during the year	3,251	3,397	3,200
Greatest number confined at any one time	216	241	222
Number of re-committals	1,553	1,323	483
Total cost of maintaining gaol	$18,347.69	$19,156.94	$19,808.61

Copies of the reports made by me to the Government upon this gaol are annexed:—

"On the 9th March I inspected the Toronto gaol for the first time during the official year. All the prisoners then in custody—163 males and 36 females—were seen. Thirty-three of the males were under sentence, and two were waiting trial for indictable offences. Seven males and seven females were certified to be insane; five males were on remand, two charged with being insane, and three with some minor offences. The remaining prisoners, viz., 116 males and 29 females, were undergoing short sentences for minor offences such as drunkenness, disorderly conduct, vagrancy, trespassing, keeping and frequenting disorderly houses."

"The accommodation for male prisoners not being adequate to the number of men then in custody, the classification was not so good as I have usually found it to be. The gaoler, too, reported that he had great difficulty in keeping up proper discipline in consequence of the overcrowding.

"One of the prisoners complained to me that he had not received the regular allowance of bread, and had therefore refused to do the ordinary work allotted to the prisoners. On enquiry I found no ground whatever for the complaint—each prisoner having received the regulation allowance of the different kinds of food without any discrimination being made.

"Considering the large number of prisoners who had been confined in the gaol during the winter months, their health had been very good, a fact which spoke well for the sanitary condition of the building. I found the gaol thoroughly clean and in good order throughout, and the discipline maintained was as good as was possible under the existing condition of things."

"I made a second inspection of the Toronto gaol on the 6th September, and found that there were 185 prisoners in custody, 122 of whom were males, and 63 were females. Seventeen of the males and three of the females were under sentence for indictable offences; six males and fourteen females were fully certified as lunatics and were awaiting removal to the asylum; two males and two females were on remand, charged with being insane; six males and two females were awaiting trial, two males were confined for want of sureties to keep the peace, and one as a debter. Twenty-six males and seven females were on remand charged with various offences, seven males (including two charged with burglary), and one female, were charged with indictable offences, and nineteen males and six females were charged with minor offences. The remainder, sixty-two males and thirty-five females, were under sentence for minor offences such as drunkenness, vagrancy, trespass, frequenters, inmates and keepers of disorderly houses, etc.

"A noticeable feature in regard to the population of the gaol up to the present date of the current year, is that a less number have been committed than during the previous year. The total commitments for the official year up to this date number, 2,316 males and 651 females. For the corresponding period of last year there were 2,522 males and 647 females, which is a reduction of 206 males and an increase of four females. This decrease is chiefly due to the smaller number of admission for drunkenness and disorderly conduct and minor offences generally.

"I found the premises in good order, and it was evident that a strict attention was paid to the duties devolving upon the officials in charge. The usual classification of the prisoners was being observed as fully as the accommodation of the gaol would permit, and the good discipline and order which prevailed was a noticeable feature.

"No material alteration in the structural condition of the premises had been

effected since the date of my last visit. The painting of the entrance hall, which was noted as a desirable improvement, has been attended to, and the gaol now presents a uniformly neat and cleanly appearance. The books also were in proper order."

WALKERTON GAOL.

	1884.	1885.	1886.
Prisoners committed during the year....	58	67	88
Greatest number confined at any one time	10	11	17
Number of re-committals.	7	5	12
Total cost of maintaining gaol.....	$2,340.25	$1,877.70	$1,932.72

A copy of the report made to the Government upon this gaol by Dr. O'Reilly is annexed:—

"An inspection of the Walkerton gaol was made by me on the 2nd June. There were six men and one woman in custody. One of the males, who is held as a vagrant, has practically become a permanent resident of the gaol, being sentenced from time to time as he is discharged. Of the other men, three were under sentence for indecent assault, illicit distilling, and obtaining money under false pretences respectively; one was insane, and one is an idiot. The one female prisoner is a lunatic.

"I found the gaol, as I always find it, in an excellent condition of cleanliness and order, and well kept in every respect. I understand there is a project on foot for heating the building with hot water. I commended the scheme most heartily to the County Council, as being one conducive to cleanliness, safety, economy and comfort."

Dr. O'Reilly instructed Mr. Mann, of this Department, to make the second inspection. A copy of the report to Dr. O'Reilly is annexed:—

"Acting under your instructions, I inspected the Walkerton gaol on the 9th August. There were in custody four men, two women, and three boys. Of the former, one had been committed as a lunatic, but had not been examined; and the other three had been committed for assault, vagrancy, and obtaining money under false pretences. The two women are both old, feeble creatures, and committed as vagrants. One of the boys is an idiot; the other two were awaiting removal to the Reformatory for Boys, to which place they had been sentenced for five years.

"The floors of the bath and wash rooms, which had become rotten from age, are being replaced by brick ones, which will be a great improvement. The books are properly kept, and the building was clean and in good order."

WOODSTOCK GAOL.

	1884.	1885.	1886.
Prisoners committed during the year....	341	367	296
Greatest number confined at any one time	35	41	34
Number of re-committals....	129	119	111
Total cost of maintaining gaol.....	$3,437.50	$3,819.77	$3,749.34

The first inspection of this gaol during the year was made by Mr. Hayes. A copy of his report to Dr. O'Reilly is annexed:—

"As instructed by you, I made an inspection of the Woodstock gaol on the 5th January. The prisoners numbered eighteen—sixteen men and two women. No less than ten of the men were under sentence for vagrancy. Several of them are strong, hearty men who have failed to get work; one of them, a shoemaker, was

doing some work for the gaol. Four others were employed in digging a drain from the Court House cellar to the town sewer. Two men had been committed as lunatics; one of them is recovering and will probably be discharged shortly. The other requires early removal to the asylum, as he is in a state of acute mania. Of the rest of the prisoners—one had been committed for contempt of Court, and three were under sentence for the respective offences of disturbing a religious meeting, burglary and drunkenness. The two women are the two idiots who were in gaol when I was last there.

"One of the prisoners is a little colored boy, ten or eleven years old, who has had no education. He told me that his mother is dead, that his father has married again, and that at the instigation of the step-mother he was turned out of his home. The Sheriff has been requested to call the attention of his Honour, the County Judge, to this case with a view to the boy's removal to the Reformatory as provided for in 43 Vic., Cap. 39, Sec. 3, should the Judge deem it in the boy's interest to commit him to that place.

"This gaol is being made use of as a common lock-up for tramps. Many are brought in, some in a most filthy condition. The majority are remanded from one to three days, and then generally discharged. It is impossible for the staff to keep the place properly clean while this practice continues. It is to be hoped, therefore, that a suitable lock-up will speedily be provided in Woodstock. For the reason just given, the gaol was not in as good a condition as it should have been. The closets are in an unsatisfactory state. Possibly the only way out of this difficulty is the adoption of the dry earth closets, and I think the County Council would do well to provide a sufficient number of these closets constructed on the latest and most approved plan.

"Three new heating furnaces have been put in and are reported to be working well.

"An apparently effectual means of preventing escapes by the gratings of the windows has been adopted.

"The attention of the gaoler and matron has been called to the contents of Rules No. 18 and 24, which do not appear to be as strictly adhered to in this gaol as they should be."

A copy of the report made to the Government by Dr. O'Reilly is annexed:—

"The Woodstock gaol was inspected by me on the 11th March. There were then fourteen males and two female prisoners in custody. Of the former, three were under sentence for larceny, one for trespass, one was held for want of sureties to keep the peace, and nine were vagrants. The two women are both old cases of imbecility, who, for the want of some better care for such people, are kept in gaol.

"The gaol was in its usual satisfactory condition.

"On this occasion I had a conference with the members of the Gaol Committee of the Council and the officials of the town, with a view to preventing the practice, which has been carried on for some time, of using the gaol for a town lock-up. I have reason to hope that as the result of this interview, the town will, as it ought to do, build a lock-up, and thus relieve the county gaol of the burden now put upon it."

WELLAND GAOL.

	1884.	1885.	1886.
Prisoners committed during the year....	300	299	245
Greatest number confined at any one time.	81	47	36
Number of re-committals.....	116	102	87
Total cost of maintaining gaol.....	$3,805.00	$3,678.09	$3,524.04.

A copy of the report made to the Government upon this gaol by Dr. O'Reilly is annexed :—

"The Welland gaol was inspected by me on the 4th May, when it contained eight prisoners—seven males and one female. One of the males is insane; he has been in the gaol some two years, but is not a fit case for treatment in the asylum. Another had been sentenced to the Central Prison for one year, but he was found owing to defective sight, to be unfit for work and was therefore returned to the gaol. The other five were vagrants undergoing short sentences. The one female prisoner had been sentenced to the Reformatory for females and was waiting removal thereto.

"The gaol was found to be in good order."

The second inspection was made by Mr. Hayes, who reported upon it to Dr. O'Reilly as under :—

"As instructed by you, I visited the Welland gaol on the 23rd September. There were then in custody eight men and one woman. Six of the prisoners were under sentence for minor offences, and one for receiving stolen goods. One was detained under *capias* and another was a lunatic, whose insanity is of a chronic nature. The prisoners were locked up for the night at the time of my inspection. The want of ventilation in the lower wards was most noticeable, the air being quite foul.

"As the gaol is being made use of as a lock-up for the town, the Sheriff has pointed out to the Council that the old basement ward of the gaol, which is not now used, could with a little alteration be made into a lock-up with accommodation for five prisoners. By the blocking up of the present doorway, all communication with the gaol can be cut off, and a new entrance can be made from the street. I would recommend the carrying out of this plan, so that the gaol may be used for its legitimate purposes only.

"The gaol was in good condition. The yard walls have been repointed and repaired."

WHITBY GAOL.

	1884.	1885.	1886.
Prisoners committed during the year.....	101	112	70
Greatest number confined at any one time.	20	23	15
Number of re-committals.....	41	33	17
Total cost of maintaining gaol.....	$2,004.82	$2,518.40	$2,290.26.

Copies of the reports made to the Government by me upon this gaol are annexed :—

"An inspection of the Whitby gaol was made by me on the 13th April. Ten male prisoners were in custody. One had been committed as an idiot and three as insane; one was under sentence for larceny, two were charged with robbery, and three had been committed as vagrants :—

"I found that the condition of the gaol as regards ventilation, etc., had not been improved in the slightest degree since the time of my previous visit. In fact the smell in the west corridor was if possible, more intolerable than ever. The other corridor in use was equally offensive though partially due, I presume, to the liniments and disinfectants used in the treatment of a prisoner who was under the surgeon's care.

"There is no proper bath-room nor bath appliance within the gaol, and prisoners when first received have to be bathed in the wash-house. This being a

light frame structure, its use for this purpose is impracticable in inclement weather."

"My second inspection of the Whitby gaol was made on the 10th September, when there were three prisoners in custody—two males and one female. One of the male prisoners had been committed as insane, and the other for larceny. The female had been committed for vagrancy.

"An examination of the premises shewed them to be in good order; the books also were properly kept, with the exception of the dietary book, which had not been entered up for several days previous to my visit. Some structural improvements have been undertaken since the date of my inspection. The ceilings of both corridors have been sheeted, the one with iron and the other with wood; also the basement of the addition was being excavated, and when completed will afford kitchen accommodation for the gaoler. Little progress, however, has been made with this work so far; but it is to be hoped, in view of the necessities of the case, it will be pushed forward as rapidly as possible. I understand that the ventilation of the gaol proper is also to be attended to and measures will shortly be taken to that end. Until this is effected no improvement can be looked for in the condition of the corridors."

Bracebridge Lock-up.

A copy of the report made by me upon this lock-up is annexed:—

"An inspection of the Bracebridge lock-up was made by me on the 8th July, when it was empty. The building was in a fair state of preservation, but was in very bad order. The interiors was in a filthy condition and the yard also was to some extent littered with refuse. Everything about the premises indicated that more care and attention were necessary. The keeper informed me that he had no person to do such work as was required to put the lock-up in good order. I instructed him to have the whole of the interior white-washed, floors scrubbed, etc., and the premises put in a thorough state of cleanliness throughout."

Gore Bay Lock-up.

A copy of the report made to the Government by Dr. O'Reilly upon this lock-up is annexed:—

"The Gore Bay lock-up was inspected by me on the 19th August. The interior was found to be in excellent order and well kept. Outside, however, it was found that owing to the conformation of the ground some damage had been done to the foundations of the walls by the water from the roof of the building. It was pointed out to the keeper how this could be remedied by grading the ground round the walls, and he was instructed to attend to it.

"The yard is not large enough to admit of the storage of fuel without risking the security of prisoners. It is desirable that a woodshed be erected outside the gate and a recommendation to build one about twelve feet by sixteen feet will be made to the Public Works Department."

Little Current Lock-up.

A copy of the report made to the Government by Dr. O'Reilly upon this lock-up is annexed:—

"I inspected the Little Current lock-up on the 19th August and found it clean and in good order. The locks upon the doors do not afford the necessary security.

The Public Works Department will be asked to furnish six long hasps and the same number of Scandinavian locks, which will make the doors as secure as doors of their class can be made."

Manitowaning Lock-up.

A copy of the Report made by Dr. O'Reilly to the Government upon this lock-up is annexed :—

"On the 19th August the Manitowaning lock-up was inspected by me. There were no prisoners in custody. The place was not in as clean and tidy condition as is desirable. It is too much mixed up with the domestic arrangements of the keeper, who lives on the premises, and who was informed that his household arrangements must be kept entirely separate from the prison part of the building.

"A short time previous to my visit a prisoner had escaped, and upon enquiring into the matter, the escape appeared to be due to the fact that a visitor had been admitted by the keeper's wife during her husband's absence to see the prisoner. I told her that such a thing must not occur again and that she must not in any way interfere with the custody or management of the male prisoners, nor must visitors under any circumstances be admitted in the keeper's absence.

"There are two improvements required on these premises. The first and most important is the deepening of the well, its present supply of water not being sufficient for the wants of the lock-up and it is estimated that by boring the rock at the bottom of the well, plenty of water would be obtained. As this would not cost more than $20 it is most desirable that it should be undertaken. The second improvement is the closing in of the lot on which the lock-up stands with a plain picket fence."

Fort William Lock-up.

A copy of the report made to the Government upon this lock-up by Dr. O'Reilly, is annexed :—

"On the 24th August, the new lock-up at Fort William, in the Thunder Bay District, was inspected for the first time since its completion. It was found to be well kept in all respects. Owing to the distance of the building from the bank of the river, and the absence of satisfactory local drainage, the basement is not as well drained as it ought to be. I had some conversation with the local authorities, and have reason to hope that in a short time, arrangements will be made by which the lock-up can be satisfactorily drained at a reasonable cost.

"No provision has yet been made for fencing the premises, except that the keeper has himself provided and placed the posts for that purpose. The Public Works Department will be asked to provide six hundred feet of woven wire fencing, which the keeper can attach to the posts. A fence of this kind will be quite sufficient for the purpose."

Parry Sound Lock-up.

A copy of my report upon this lock-up to the Government is annexed :—

"There were no prisoners in custody when I visited the Parry Sound lock-up on the 9th July, in fact very few have been committed lately. It is now eight years since the lock-up was built, and the evidences are that it has been well kept and properly looked after throughout. Slight repairs are necessary to some parts of the floor, and these were arranged for."

Huntsville Lock-up.

A copy of the report made by me to the Government upon this lock-up is annexed:—

"An inspection of the Huntsville lock-up was made by me on the 7th July. There were no prisoners in custody, and I found that only thirty-seven in all had been committed since the opening of the lock-up in July, 1885. Instructions were given as to the method of keeping the register.

"There are seven cells in this lock-up—five for males and two for females—with day-rooms attached. All were in excellent order, although a very disagreeable smell was noticeable, presumably caused by the oil which had been used on the woodwork. This was so offensive that instructions were given to have the wood varnished, with a view to covering up the oil and thus get rid of the smell."

Maganetawan Lock-up.

A copy of the report made by me to the Governmsnt on this lock-up, is annexed:—

"In company with the Provincial Architect, I made an inspection of the Maganetawan lock-up, on the 7th July, notification having been received of the completion of the contract for its erection. The building contains four cells, and a day-room; this the keeper will have to occupy when he has prisoners in custody.

"Instructions were given to have the building properly cleaned, and made ready for occupation. The work of construction has been very satisfactorily carried out."

Mattawa Lock-up.

A copy of my report to the Government upon this Lock-up is annexed:—

"This Lock-up was inspected by me on the 22nd September, when I found only one prisoner in charge. The building was in good order, and well kept. During the past year the prison labour had been well utilized in erecting a fence around the building, and also a woodshed sufficient for the storage of all the fuel required. The land has also been graded, and a well dug. The well is about thirty-three feet deep, and the indications are that a large supply of water will be secured as soon as there is available labour to dig it three or four feet deeper.

"It does not appear that this Lock-up will afford sufficient accommodation for any great length of time to come, as I found that as many as twelve prisoners had been committed at one time. The number of commitments during the past year up to the present date is forty-three. Neither are there any arrangements on the premises for cooking, in fact there is no apartment that could be used for the latter purpose.

"The attention of the Public Works Department will be directed to the matter, and a recommendation made to construct a bed-room, living-room and kitchen, for the gaoler; and a magistrates' room, also, as there is no room which can be occupied by the magistrate in conducting his investigations.

"Another alteration which is necessary, and can be performed by prison labour, will be submitted, namely, the moving of the fence out to the line of the lot on the south side of the building, say twenty feet. All that will be required in this case is the material."

CENTRAL PRISON.

The history of the Central Prison for the past year may be said to be so fully recorded in my notes of inspection, the reports of the Warden, the Surgeon and the managers of the Prisoners' Aid Association, that but little else can be said in regard to the ordinary routine work of the institution for the period under report.

The structural alterations and additions, which are nearly completed, have been made principally with a view to affording greater convenience and facility, but they also favourably affect the discipline and order of the prison, and it may be predicted with the strongest assurance that they will largely further the purposes for which they have been introduced. The work of the prison can now be more thoroughly systematized than with the former structural arrangements.

Apart from the disastrous fire which occurred on the 28th March last, and which is fully referred to in my notes of inspection, no prominent occurrence has taken place to disturb the ordinary routine of the prison, and in view of the disturbance and displacement caused by the fire it may be truthfully said that the daily work has been as a whole well accomplished, and the affairs of the prison generally are now in a more satisfactory condition than they have been for years past.

Statistical tables shewing the movements of the prisoners, and the general operations of the prison during the year, are annexed.

The first table shews the discharges, committals, etc., during the past there years :—

	1884.	1885.	1886.	
In custody at commencement of year (1st October).	273	335	360	
Committed during the year	723	761	594	
Recaptured	1	..	4	
Total number in custody during year	997	1,096		958
Discharged on expiration of sentence	622	704	642	
" " payment of fine	24	15	4	
" by remission of sentence	6	4	6	
Retransferred to common gaol as unfit for labour.	1	4	12	
Died in the Prison Hospital	3	..	..	
Transferred to a lunatic asylum	2	2	1	
Escaped	4	3	6	
Conviction quashed	..	4	..	
Total discharges, deaths, etc.	662	736		671
Remaining in custody at close of year (30th Sept.)	335	360		287

The most noticeable feature in this table is the reduction in the number of prisoners received into the prison during 1886. The decrease, as compared with the commitments of 1885, is 167, and 129 as compared with those of 1884. It will also be seen that another year passed by without a death occurring in the prison. Considering the habits of many of the prisoners prior to their reception into the prison and their state when received, it is surprising that there are not many deaths to record each year. That there are not, speaks volumes for the treatment the prisoners receive whilst confined in the Central Prison and for its sanitary condition.

During the year 1886, twelve prisoners had to be returned to the county gaols from which they had been transferred, owing to their unfitness for hard labour. I regret that prisoners are still sentenced to the prison who are incapacitated, some physically and some mentally, for labour, notwithstanding the fact that efforts have been made to impress upon members of the Judiciary the extreme desirableness of only sentencing to the prison such prisoners as can do a fair days work. I find, too, that there is at times a good deal of difference of opinion between some of the gaol surgeons and the Warden of the prison as to a prisoner's ability to work. I trust that those having authority to pass sentence upon prisoners will bear in mind that the presence of a prisoner in the Central Prison who is unable to work is a source of great inconvenience and adds to the difficulty of keeping up the discipline and routine of the prison.

The summary which follows shews the number of prisoners sentenced direct to the prison, and the number transferred from the common gaols in 1884, 1885 and 1886. It will be noticed that the proportion of prisoners sentenced direct to the prison has increased each year.

	1884.	1885.	1886.
Sentenced	374	513	455
Transferred from gaols	349	248	139
	723	761	594

The next table shews the periods of sentence passed upon the prisoners received into the prison since its opening.

SENTENCE.	1874.	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.	1886.
One month and under	.....	.....	15	6	7	11	17	171	125	140	81	51	22
Over 1 month and up to 2	.....	.....	10	2	35	16	23	101	127	105	88	76	42
" 2 months " " 3	60	13	73	90	100	40	45	38	91	95	118	128	75
" 3 " " " 4	54	38	110	127	65	43	46	38	.....	.....	.....	.....	.....
4 months	50	56	66	76	.....	59	47	53	60	43	61	66	52
5 "	5	18	7	12	11	11	11	5	10	9	14	31	20
6 "	97	205	186	179	214	224	186	174	199	151	203	213	213
7 "	.....	2	1	1	6	2	6	5	4	5	6	3	7
8 "	6	8	4	1	7	6	3	5	6	5	4	3	12
9 "	4	7	20	1	22	20	27	20	15	9	18	21	20
10 "	1	4	6	.....	4	.....	3	1	4	1	5	1	4
11 "	1	.....	2	.....	1	4	.....	2	.....	2	.....	.....	.....
12 "	38	45	94	88	94	93	87	72	69	67	75	101	69
13 "	.....	.....	1	.....	.....	1	.....	.....	1	.....	2	.....	1
14 "	.....	.....	.....	2	.....	1	.....	1	2	2	1	.....	4
15 "	2	1	7	1	5	1	6	4	3	3	2	7	1
16 "	.....	.....	.....	.....	2	1	4	.....	1	2	1	2	5
17 "	.....	.....	.....	.....	1	.....	.....	.....	1	.....	.....	.....	2
18 "	10	12	17	27	30	17	23	23	11	13	13	24	17
19 "	1	.....	.....	.....	1	.....	1	.....	.....	.....	.....	.....	1
20 "	2	.....	.....	.....	2	2	.....	1	2	2	2	4	3
21 "	.....	.....	1	.....	1	.....	2	3	.....	.....	.....	.....	2
22 "	1	.....	1	2	5	2	1	2	2	.....	7	3	1
23 "	4	3	8	20	8	7	10	12	20	5	13	19	11
24 "	10	14	8	18	8	3	9	7	11	10	8	8	10
48 "	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
2½ years	1	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
3 "	3	.....	.....	1	2	1	1	3	2	.....	.....	.....	.....
3½ "	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
4 "	5	.....	.....	.....	1	1	2	3	.....	.....	.....	.....	.....
4½ "	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
5 "	4	.....	.....	1	4	1	.....	1	.....	.....	.....	.....	.....
Totals	370	426	637	655	636	567	560	745	767	669	723	761	594
Average period of sentence each year	6 12 30 Months.	7 3 30 Months.	6 20 30 Months.	5 22 30 Months.	7 10 30 Months.	7 3 30 Months.	7 14 30 Months.	5 12 30 Months.	5 12 30 Months.	4 28 30 Months.	6 18 30 Months.	6 20 30 Months.	7 8 30 Months.

Boys transferred from Reformatory owing to incorrigibility.

The tables appended contain statistics relating to the total number of prisoners committed to the prison, as well as to those sentenced during the year.

Nationalities.	Committed during the year.	Total commitments.
Canadian	296	3,801
Irish	76	1,358
English	106	1,416
United States	64	882
Scotch	30	413
Other countries and unknown	22	248
	594	8,118

Religious Denominations.		
Church of England	217	2,999
Roman Catholic	186	2,812
Presbyterian	86	885
Methodist	80	987
Other denominations, etc.	25	435
	594	8,118

Civil Condition.		
Married	178	2,519
Single	416	5,599
	594	8,118

Social Habits.		
Temperate	133	1,728
Intemperate	461	6,390
	594	8,118

Educational Status.		
Could read and write	498	6,104
Could read only	23	836
Could neither read nor write	73	1,178
	594	8,118

The prisoners committed during the year who were reported to be of temperate habits, represented 22.39 per cent. of the total number; in 1885, the percentage was 18.92, and in 1884, 11.75.

The totally uneducated men represent 12.25 per cent. of the total commitments. This is a decrease as compared with the two preceding years when the prisoners without any education represented 14.45, and 15.62 per cent. of those committed.

Maintenance Expenditure.

The cost of maintaining the prison during the years 1885 and 1886, is shewn below:—

Service.	Year ending 30th Sept., 1885.		Year ending 30th Sept., 1886.	
	Total expenditure.	Average daily cost per prisoner.	Total expenditure.	Average daily cost per prisoner.
	$ c.	cts.	$ c.	cts.
Medicine and medical comforts	103 76	0.079	591 67	0.464
Meat and fish	9,494 56	7.237	7,903 69	6.196
Flour, bread and meal	5,628 17	4.290	4,289 43	3.362
Groceries	3,851 59	2.936	4,659 08	3.652
Bedding, clothing and shoes	7,493 90	5.712	6,023 94	4.723
Fuel	3,915 08	2.984	3,391 13	2.658
Gas, oil and candles	1,144 51	0.872	939 35	0.737
Laundry, soap and cleaning	2,068 48	1.577	1,767 32	1.385
Stationery, advertising and printing	727 83	0.555	559 45	0.439
Library, school and religious instruction	700 00	0.535	717 05	0.562
Water			1,000 00	0.784
Furniture and furnishings	433 55	0.330	928 65	0.729
Stable expenses, forage, etc	1,255 43	0.957	898 62	0.705
Repairs, ordinary	622 23	0.474	1,006 55	0.789
Unenumerated	1,481 56	1.130	2,223 60	1.744
Farm and grounds	780 74	0.595	1,019 21	.799
Salaries and wages	18,975 68	14.463	20,451 04	16.033
Total	58,677 07	44.724	58,369 78	45.761

Manufacturing Operations.

A statement of the amounts expended in carrying on the manufacturing operations of the prison is annexed :—

	1885.	1886.
Carpenter and cabinet shop	$771 93	$501 76
Tailoring shop	4,719 90	4,735 56
Shoe shop	3,539 74	3,539 07
Blacksmith's shop	471 66	80 18
Broom shop	436 33	881 74
Woodenware department	248 67	395 50
Brickyard	3,858 10	711 11
Stationery, advertising and printing	319 79	83 45
Miscellaneous	363 95	887 10
Salaries and wages	5,291 26	5,523 36
Manufacturing expenditure	$20,128 98	$17,335 85
Maintenance expenditure	58,677 07	58,369 78
Total expenses	$78,806 05	$75,705 63

It will be seen that the cost of carrying on the Industrial Department was $2.793.13 less in 1886 than in 1885. The reduction is chiefly caused by the fact that no wood had to be bought for the brickyard, there being sufficient left over from the previous season.

The revenue of the various industries is shown in the following summary :—

	1885.	1886.
Broom shop, hire of prisoners.....	$9,488 29	$9,441 98
Woodenware shop, hire of prisoners..	7,213 27	10,419 79
Brickyard, sales.....	12,549 48	5,605 26
Tailoring shop, sales.....	6,700 46	4,648 23
Shoe " "	3,732 39	3,382 34
Carpenter's shop, sales.....	195 32	137 05
Blacksmith's "	175 37	341 95
Miscellaneous	563 22	497 75
	$40,617 80	$34,474 35

A decrease in the revenue of $6,143.45 will be observed, caused by reduced receipts from the brickyard, and shoe and tailor shops. The decreased number of prisoners compelled the Warden to put less men to work in the brickyard than in the previous years, as he was bound to keep the contractors in the broom and woodenware shops fully supplied, and consequently the output from the yard was less and the sales fewer. In addition to this, a considerable quantity of the brick made in the prison yard, was used in the many permanent structural improvements made to the prison, and for which no cash was received. The reduction in the receipts of the tailor and shoe shops is accounted for by the fact that at the close of the year several accounts for gaol clothing supplied to the Counties were outstanding.

The table annexed shews how the prisoners were employed, and the number of days' work which was performed by them at the different industries :—

	1885.	1886.
In the broom shop for contractors.....	23,383	22,047 days.
" woodenware shop for contractors.....	28,566	30,507 "
Total contract work.....	51,949	52,554 "
In the brickyard	13,768	10,989 "
" tailoring shop.....	5,658	4,432 "
" shoe shop.....	2,463	1,900 "
" carpenter's shop.....	2,560	2,132 "
" tinsmith and engineer's shops.....	1,328	1,391 "
" blacksmith's shop	602	797 "
In permanent improvements and work on Prison and Reformatory grounds.....	10,905	8,917 "
Number of days of productive labour.....	89,233	83,112 "
" " domestic work	14,045	13,839 "
Total number of days worked	103,278	96,951 "

The proportion which the number of days of productive labour bears to the total stay of the prisoners during the two years will be seen in the following summary :—

1885.

Total stay of prisoners	131,196 days.
Number of days' productive labour	89,233 "
Proportion	68.01 per cent.

1886.

Total stay of prisoners	127,555 days
Number of days' productive labour	83,112 "
Proportion	65.16 per cent.
Difference in favour of 1885	2.85 "

Transfer of Prisoners.

The following statement shews the cost of removing prisoners from the county gaols to the Central Prison :—

WHEN TRANSFERRED.	Number Transferred.	Prisoners' fares to the Prison.	Travelling expenses and salary of Bailiff.	Cab hire and food for prisoners.	Total.
		$ c.	$ c.	$ c.	$ c.
October, 1885	66	175 45	221 30	53 10	449 85
November, "	75	163 15	195 65	52 25	411 05
December, "	43	128 90	172 80	33 35	335 05
January, 1886	76	205 55	197 30	51 00	453 85
February, "	42	48 90	164 25	22 25	235 40
March, "	36	95 15	184 85	29 75	309 75
April, "	43	120 45	187 15	36 90	344 50
May, "	31	57 05	138 20	21 65	216 90
June, "	44	121 80	203 70	39 25	364 75
July, "	40	58 90	166 20	29 75	254 85
August, "	38	132 15	257 60	34 00	423 75
September, "	62	145 80	203 90	44 00	393 70
Totals	596	1,453 25	2,292 90	447 25	4,193 40
Average expenses incurred per prisoner		2 44	3 84	75	7 03
Preceding year	744	2 18	2 88	66	5 72

The increased cost per head is caused by the great reduction in the number transferred, for, although the total outlay was less than last year, the travelling expenses of the Bailiff were greater, as he had to make more journeys to distant points for fewer prisoners This year he had, for instance, to go to Rat Portage for two prisoners.

Discharged Prisoners.

The annexed summary shews the amount paid for return fares for discharged prisoners and the number and destination thereof:—

WHERE SENT.	Number of Prisoners.	Amount paid.
Barrie	4	$ 6 50
Belleville	10	27 90
Berlin	4	7 60
Bracebridge	1	4 10
Brantford	5	9 85
Brockville	16	73 80
Burketon	1	1 55
Buffalo	7	22 00
Bowmanville	2	2 75
Brampton	1	65
Beeton	1	1 65
Chatham	11	53 15
Cobourg	10	19 35
Cornwall	2	12 10
Caledonia	1	1 70
Collingwood	1	3 05
Flesherton	1	2 55
Fort Erie	1	3 20
Galt	3	5 10
Guelph	6	8 90
Gananoque	2	9 60
Hamilton	43	51 20
Hillsburg	1	2 55
Haliburton	1	4 00
Ingersoll	2	5 70
Kingston	10	42 05
London	17	55 40
Lansdowne	1	4 70
Lindsay	1	2 15
L'Orgnal	1	7 85
Longwood	1	4 00
Montreal	1	5 00
Napanee	1	3 25
Newcastle	1	1 50
Ottawa	27	167 05
Owen Sound	8	28 50
Orillia	1	2 60
Pembroke	1	7 00
Perth	4	12 50
Peterboro'	2	4 75
Port Arthur	10	90 75
Port Hope	2	3 15
Park Hill	1	3 85
Rosewood	2	2 45
St. Catharines	9	18 50
Sutton	2	3 25
St. Thomas	9	32 15
Sarnia	7	26 75
Sault Ste. Marie	5	36 50
Simcoe	2	6 35
Stratford	2	5 45
Sandwich	2	10 00
Suspension Bridge	1	2 70
Smith's Falls	1	5 20
Strathroy	1	4 25
Uxbridge	2	2 50
Windsor	28	140 65
Welland	26	66 35
Walkerton	3	10 75
Whitby	2	2 00
Woodstock	4	10 25
Wiarton	1	4 50
Waterford	1	2 95
Total	337	1,180 05

INSPECTIONS.

Copies of the reports made by me to the Government of my inspections of the prison, are annexed. Following them will be found the reports of the Warden (with statistical tables attached), of the Superintendent of the Sunday School, of the President of the Prisoners' Aid Association, and of the Surgeon of the Prison.

"I made an inspection of the Central Prison on 18th and 19th of March. There were 409 prisoners in custody on the second day of my visit, who were distributed among the prison industries in the following way:—

Broom shop	97
North shop	110
Brickyard	63
Garden and grounds	19
Tailor shop	17
Shoe shop	6
Carpenters, painters, machinists, etc	15
Permanent improvements	5
Domestics	50
In Hospital	12
Canvalescent	7
Under punishment	8
Total	409

"The prisoners were found to be in a good state of health generally. Nine were under treatment for various ailments, mostly of a light or transient character. One only of these in hospital was seriously ill and that was due to his condition prior to entering the prison. There were few complaints made to me by the prisoners in regard to their treatment, and those I listened to (with one exception) I found upon enquiry to be groundless. My impression, from general observation, is that a very much better state of feeling now exists amongst the prisoners towards the officials of the prison, than was manifest at times during last year

"From the punishments record and the information I gathered during my inspection, I feel convinced that since the criticism of the press have ceased, and the Commissioners have closed their investigation, those prisoners who were formerly disposed to be so turbulent and insubordinate have become more amenable to the rules, apparently from the conviction that they will receive no further countenance in their clamourings about alleged grievances, their only object being to foster discontent and insubordination amongst the prisoners generally.

"The industries of the prison I found to be in a fairly prosperous condition, and they appeared likely to continue so.

"The brickyard industry is particularly promising. A large quantity of clay has been dug during the past winter and piled ready for the season's operations which will begin as soon as the weather is favourable, and every effort will be made to secure a larger output than has hitherto been effected. Much, however, depends upon the season being propitious.

"The Brandon Manufacturing Company have a large supply of material on hand, and also of manufactured goods in store; and from the orders they have yet to fill, a large amount of work to be done in the north shop seems assured. Since the enlargement of this shop a much better condition of things exists in

regard to the order and routine of work performed. The room and facilities now available are well utilized, and a general trimness is noticeable in the way the shop is kept,

"In the broom shop there is also ample employment for such prison labour as is adapted to the work, and the output is satisfactory, both as regards quantity and quality.

"Appropriations for necessary improvements have been made, and some of the works previously arranged for are being proceeded with in a satisfactory manner. One of the principal of these is the construction of cells in the basement of the main building, formerly occupied as the kitchen, etc. The greatest care has been exercised in planning the arrangement of these cells with a view to securing good ventilation, and sanitary condition generally. It will be sometime yet before these cells are ready for occupation.

"The construction of a hoist in the north shop will be proceeded with as soon as possible, as the facilities which will be afforded by this improvement are much required.

"The building in which the bakery and wash-room were situated before the erection of the present kitchen, can now be utilized for office-room for the Brandon Manufacturing Company, as arranged for in the terms of their agreement, the necessary alterations and repairs have been authorized, and this work, also, will be put in hand at the earliest possible date.

"An examination of the food supplied shewed that, both as to quantity and preparation, due care was taken to provide a wholesome supply and in sufficient quantity.

"The stores, books, etc., in the business department were found to be in a satisfactory condition.

"The prison buildings and premises generally were neat and orderly, and afforded ample evidence of the faithful discharge of the duties devolving upon the officials as a whole.

"In view of the recommendations made by the Commissioners, in their report upon the recent investigation as to the desirability of certain changes and alterations in the rules and regulations governing the prison, attention is being given to such of them as can be made available under the present structural character and condition of the buildings.

"In many respects the present condition of the prison is very satisfactory, and the outlook on the whole in regard to various interests involved is also encouraging.

"I made a second inspection of the Central Prison on the 19th, 20th, and 21st July. On the first day of my visit there were 273 prisoners in custody. The health of the prisoners was good, and I found only four men in the hospital, none of whom were seriously ill. The surgeon's book did not indicate that anything more than the usual complaints of a light character had been treated lately.

"I also made an examination of the records of the prison and found the books to be neatly kept. Those specially looked into were the minute book, the prison offence book, register of discharges, clothing record, and distribution of labour books. The offence book showed that a number of petty offences had been recorded during the past and present month, and about the usual number of more aggravated offences. No less than forty-four offences were reported last week. The greater number of these, however, were due to the enforced idleness of the prisoners by being locked up while search was being made for one who was attempting to escape. At other times these acts of insubordination are apparently not attributable to any specific cause or condition other than the force of example and surrounding influences. The largest number of prisoners in custody at any

one time during the present year was 330, the present number (273) showing a reduction in the population of 157 within five or six months, and the present number is lower by forty-eight than that of the same date of the previous year.

"Since the date of my last minutes of inspection a most damaging fire occurred in the main building, viz., on the 28th March, destroying entirely the chapel which was in the upper storey, the guard rooms, and a considerable portion of the warden's quarters. Much damage was also done to the furniture by the water and the flooding of the basement in which the new cells are being constructed.

"The fire was first discovered in the cupola, which had been constructed as a ventilator, and the ventilating shafts connecting with the chapel had led the fire in that direction. Nothing definite can be said as to its origin, but after due enquiry it would appear that the most reasonable theory is that it was caused by the ignition of a spark from some neighboring chimney. The sparrows had been building nests in the cupola, and it was found necessary to clean away their nests from time to time, but no person had been on the roof for three days previous to the fire.

"The work of repairing the damage done throughout the building has seriously interfered with the regular industrial operations of the prison, as a large amount of labour had to be necessarily withdrawn from them and utilized in clearing away the *debris* and preparing for the reconstruction. More than ordinary viligance has also been necessary to maintain the usual order and discipline of the prison. The roof and the other more material parts destroyed are now about restored, and the building will soon be placed in its usual condition, with some improvements added that have suggested themselves by the experience of past years.

"The completion of the new cells in the basement will be delayed for some little time, as they will have to be properly dried. Every precaution has been taken to secure proper heating and ventilation. The material used in the construction of the floor and walls has made them impervious to moisture, and ducts, for receiving and discharging the air from the basement, have been introduced; so that, with perfect immunity from dampness and thorough ventilation, the condition of these cells, from a sanitary point of view, would appear to be as satisfactory as it is possible to make them.

"Another important improvement made, is the construction of elevated bridges from the cell blocks leading into the chapel, which will greatly facilitate the maintaining of proper discipline among the prisoners going to and fro. Formerly, they were obliged to use a comparatively narrow passage, and a good deal of crowding and disturbance was occasioned thereby. The construction of reception cells on the ground floor has also been delayed in consequence of the fire. A plan of them (nine in number) has, however, been agreed upon, and the work will be proceeded with immediately. When these are completed, an addition of thirty-seven cells will be provided, which will largely reduce the overcrowded state of the prison during the winter months.

"The alterations necessary to furnish an office and sample room for the Brandon Manufacturing Co. in the room formerly occupied as laundry and bakery, are nearly finished, and the advantages therefrom will be very considerable. At present, parties having business communications with that firm, must necessarily traverse the yard where prisoners are largely employed, but as the accommodation now being provided is adjacent to the entrance gate, no necessity will therefore exist for the appearance of strangers in distant parts of the yard and works.

"The construction of the dust exhaust is also well under way and will be completed in due time, and will prove of great benefit to the prison population.

"The industries I found to be in a fairly prosperous condition considering the disturbance and displacement caused by the fire. The north shop tenanted by the Brandon Co., is now a scene of activity, and the firm appear to be making good progress in turning out a large quantity of wooden ware of all descriptions. The broom shop, however, is not so flourishing, the demand for brooms not being brisk of late. The brickyard output will in all probability fall largely short of the estimate made for the present season, in consequence of the decreased number of prisoners in custody and to the large amount of labour required for other work. The gang, which is about half its usual strength, has been kept fairly at work and the output is of first class quality.

"The order and neatness of the shops and premises was satisfactory, except that too great a quantity of material was deposited in the north shop. There appears to be no actual necessity for this large accumulation of material, and it is apt to prevent the guard in charge from supervising the work as thoroughly as is desirable. The Warden will therefore call the attention of the Company to this matter and see that it is attended to. The surroundings of the north shop might also be improved by the removal of all refuse.

"In the interviews afforded the prisoners for stating any grievance, no complaints were made of any moment; as a rule they were trivial in character, relating principally to the dietary, and were made presumably with a view to keeping alive the grievances which they so thoroughly aired in that direction before the Commissioners during the inquiry of last year.

"The food supplied during the days of my visit, I found to be of good quality, well prepared, and in every respect satisfactory."

"I made a third inspection of the Central Prison on the 7th and 8th of October.

"On the first day of my visit there were 277 prisoners in custody, distributed as follows:—

Industrial Department.

Broom shop	57	
North shop	93	
Brickmaking	27	
Farm and garden	13	
Tailor shop	14	
Shoe shop	4	
Carpenters and painters	8	
Blacksmiths and machinists	6	
Permanent improvements	10	
Female Reformatory	4	
		236

Domestics.

Corridor cleaners	14	
Cooks and bakers	10	
Groom and stock herds	3	
Orderlies and waiters	6	
Clerk, barber, etc	5	
		38

Unemployed.

In Hospital	0	
Unfit for work	2	
Under punishment	1	
		3
Total		277

"The health of the prisoners has been exceptionally good for some time past, and I had the satisfaction of finding the Hospital without an occupant. This good condition of health shews the excellant sanitary state of the prison, and that due care is taken to secure the prisoners well-being physically.

"During my visit it was also gratifying to find evidence of good and docile feeling prevailing among the prisoners, that as a rule order and discipline were well observed and that this condition of matters is to some extent at least due to the measures adopted to secure such results.

"The evening school has lately been resumed, and the minds of the prisoners attending are more or less occupied with their studies from day to day as they have opportunity.

"Many of them I found industrially working at slate arithmetic during the mid-day meal hour, others were reading, and I only found three out of all the prisoners in custody who made any formal complaint in regard to their surroundings or treatment.

"A number of gentlemen, who take an interest in the welfare of the prisoners, have offered to deliver lectures or addresses to them on various subjects during the coming winter and their offers have been accepted. The liberty to attend these evening entertainments is made conditional upon good behaviour, and wilful misconduct forfeits the right of the prisoners to be present at them.

"The inducements no doubt act as incentives to good behaviour and have a good effect generally upon the prisoners.

"The structural improvements made lately have also added materially to the discipline of the prison, and the most beneficial results have been produced by using the new basement cells exclusively for prisoners who have been in the habit of disturbing the rest and quiet of the well disposed in the wings, or for others who misconducted themselves in such a way as to make their isolation necessary. The thorough separation of the basement cells from those in the wings adapts them admirably for this specific use, and the only regret is that when the prison population is increased, as it has heretofore during the winter months, all the cell room is required, and those in the basement must be used for ordinary occupation.

"The dust exhaust, which has been put into the north shop during the present season, and lately finished, is, in many respects, a valuable improvement, and it is gratifying to note the satisfactory working in keeping the shop clean and tidy by the instant removal of all shavings, sawdust and small cuttings, also affording good ventilation and entire relief from dust. In order to perfect the whole arrangement in connection with the introduction of the dust fan, however, it has been found desirable to excavate an area on the north side of the shop connecting with the furnace room, to be used for the purpose of passing the rougher and larger portions of the refuse coming from the shop, and when this alteration is made, the appointments of this shop in all its departments will be in as perfect a state as they can be put.

"Previous to the fitting up of the bath-room in the basement during the present season, great inconvenience was felt, and considerable loss of time was caused for the want of proper appliances and accommodation. The objectionable conditions have been entirely removed by using the rooms now occupied, and refitting them with appliances for shower instead of tub bathing, and four hundred men can now be bathed in two hours time.

"The improvements and alterations contemplated during the season have been pushed forward as rapidly as the work could be overtaken; delay in their completion, however, has been caused by the increased work involved in restoring the damage by fire, and the construction of the reception cells on the ground floor has not yet been begun for the same reason, but as this work is under cover it can be done during early winter, and a commencement will shortly be made.

"I found the industries in a satisfactory state, and the work in the several shops conducted in an orderly and systematic matter. The output from the brick yard, although not up to the usual quantity, will exceed what was anticipated for some time subsequent to the fire.

"When the work on the improvements contemplated during the present year is completed, but little can be seen to prevent a steady expenditure of the prison labour in industrial work in the future."

REPORT OF THE WARDEN.

CENTRAL PRISON OF ONTARIO.

TORONTO, 30th September, 1886.

ROBERT CHRISTIE, ESQ.

Inspector of Prisons and Public Charities.

SIR,—I have the honour herewith to submit the Thirteenth Annual Statistical Report of the Central Prison for the year ending 30th September, 1886.

The number of prisoners in custody at the commencement of the year was 360, and at this date there are 287, a reduction of 73. The number received during the year was 594 as against 761, in the preceding one, being 167 less. This reduction may be attributed largely to the greater plentitude of employment for the working classes, there being but 276 who gave their occupation as "labourers," as against 328 in 1885, and the statistics shew that only 108 were committed for vagrancy as against 171 last year. The daily average does not shew so much reduction as the above figures would foreshadow, being but ten under that of last year. This is accounted for by the longer average term of sentence, which was 7.08 months against 6.20 months in 1885.

The statistics give the usual particulars under the several heads, and do not call for special remark. The prisoners have been kept at steady employment throughout the year, and the discipline has been well maintained.

The new kitchen commenced last year was finished by the end of December, and occupied early in January. While occupying but a small space of ground, eighty feet by forty feet, it is so arranged as to contain ample accommodation for all the purposes intended, namely, cooking-room, scullery, bakery with two ovens, store-room, officers' mess-room, meat refrigerator, and cellar, and being constructed with sash partitions, enables the guard in charge to have all the prisoners employed therein always under his oversight. Its erection has, (apart from the excellent facilities provided, and the comfort it affords for carrying out the culinary work, as compared with the former

condition of things), relieved the main building and the cell house of the offensive smell with which cooking is at times attended, and all the objectionable accompaniments of a basement kitchen. It is not complete as to utensils, but that will follow.

The erection of cells in basement, intended for such prisoners as are guilty of misconduct, or offend against order by causing disquiet in the cell blocks, is completed, and they will be occupied hereafter as circumstances require; there are twenty-eight of them. This is in the direction of classification, which will be further extended when other alterations on the main building, now in progress, are completed.

Part of the basement has been converted into a bath-room, where twenty-eight prisoners can bathe at one time. The advantages thereby secured over the former arrangements, in many respects, are very considerable. This necessary and important part of the work can now be gone through with comfort and rapidity, and in connection with that, better conveniences are provided for the distribution and prevention of waste and destruction of clothing.

The enlargement of the North shop so as to provide more fuel space, a bending-room, and power to elevate loaded trucks to the upper flat, is completed, and the exhaust fan and dust arrester will be in operation in a few days.

The building formerly used as a bakery and laundry is being converted into an office and sample room for the Brandon Manufacturing Company, which being near the east gate, will be much more convenient than where they are at present located.

The old bath-room has been added to the tailor and shoe-shops, making them larger, and affording space for working to better advantage.

These additions and improvements represent a very considerable expenditure of skilled labour, and a consequent increase in the value of the prison premises. Estimating the bricks used at the same price as we got for what was sold, and for which may it be added, no credit is given to the prison industries, and the time of masons, bricklayers, plasterers and carpenters, at fifty cents per day, they amount to $6,360.00, irrespective of expenditure upon them under capital appropriation, for building materials.

On the evening of the 28th March, the roof of the main building over the chapel was destroyed by fire, and the floors and ceilings underneath, with all the furniture badly damaged. So soon as an appraisement of the loss was made, the work of reconstruction was begun, and pushed as fast as the limited number of prisoner tradesmen admitted of, and with the exception of the slating and galvanized iron work, the building has been restored wholly by prison labour. In rebuilding, the alterations intended to be made were carried out as the work proceeded; such as the removal of the stairs to the chapel, and the substitution of bridges from the upper galleries of the cell blocks in both wings to the chapel in their place. This, since the occupancy of the chapel for religious services was resumed, has been found a very great improvement, preventing the mixing up of the prisoners from the two wings, and many breaches of discipline which the former stairs afforded facilties for.

There remains yet to be done in the main building, but under way, the construction of eight reception cells; the conversion of the dining room into rooms for the night-school, the Surgeon, library, and a room for the guards and employees; and on the first floor, the fitting up part of it as a Hospital, and bed-rooms for the Deputy Warden, Sergeant, and Guards. This represents a large amount of work, but in some parts it is well advanced, and the whole is expected to be finished by the beginning of March next, after which it is to be hoped no further alterations or enlargements will be necessary for some years.

The amount paid in to the credit of the Provincial Treasurer, as the receipts from the several industries, amounted to $34,474.35, being less than last year by $6,143.45; but there is $14,021.09 due by counties for gaol supplies, and the contractors for prison labour. The output of brick last season was less than for some years, realizing only $5,605.26 as against $12,549.48 the previous year, making a shortage in the receipts this year of $6,944.22 from that industry alone. This season the output will be larger, and with fewer prisoners engaged on work upon the buildings hereafter, the receipts from this industry may be expected to come up to what it was formerly.

The enlargement and alterations on the North shop exceeded the estimated cost about $1,000, and to cover the cost for materials for the alterations on the main building, an appropriation on capital account of $2,000 will be required. The flooring on the balconies upon the cell blocks will have to be renewed next year, which will cost about $500, and the cooking utensils required will cost about $600.

I have the honour to be, Sir,
Your obedient servant,

JAMES MASSIE, *Warden.*

ANNUAL RETURN OF THE CENTRAL PRISON, 1886.

Remaining in custody September 30th, 1885	360	
Committed during the year	594	
Re-captured	4	
Total		958
Discharged on expiration of sentence	642	
" " payment of fine	4	
" " by remission of sentence	6	
Re-transferred to Common Gaols	12	
Transferred to Lunatic Asylum	1	
Escaped from custody	6	
Total		671
Remaining in custody September 30th, 1886		287

NATURE OF SENTENCE.

To Central Prison	455	
To Common Gaol	139	
Total		594

SOCIAL CONDITIONS.

Married	140	
Single	416	
Widowers	38	
Total		594

EDUCATION.

Read and write	498	
Read only	23	
No education	73	
Total		594

AGES.

Under 18	23	
From 18 to 20	66	
" 20 " 30	259	
" 30 " 40	123	
" 40 " 50	71	
" 50 " 60	41	
" 60 " 70	11	
Total		594

NATIONALITIES.

England	106	
Ireland	76	
Scotland	30	
Canada	296	
United States	64	
Other Countries	22	
Total		594

RELIGIONS.

Church of England	217	
Roman Catholics	186	
Presbyterians	86	
Methodists	80	
Baptists	13	
Lutherians	6	
Congregationalists	1	
Hebrews	1	
Pagans	2	
No Religion	2	
Total		594

HABITS.

Temperate	133	
Intemperate	461	
Total		594

CRIMES.

Assault, common	24
" indecent	12
" malicious	2
" and larceny	2
" aggravated	6
" with violence	2
" with intent	2
" and robbery	2
" and battery	1
" on police	3
" on constable	2
Assisting at cock fight	1
Attempt at felony	2
" " larceny	3
" " rape	1
Arson	1
Bigamy	3
Bringing stolen property into Canada	4
Breach of License Act	3
" " Scott Act	1
Burglary	13
" and larceny	1
Carrying unlawful weapons	1
Drunk	15
" and disorderly	5
Disorderly	2
Embezzlement	3
Exposure of person	2
Escape from custody	1
Felonious wounding	1

Forgery	11	
" and escape	1	
Frequenting disorderly house	2	
False pretences	13	
Felony	3	
Fraud	2	
Horse-stealing	4	
House-breaking	5	
" " and larceny	6	
Insulting language	1	
Keeping disorderly house	3	
" house of ill-fame	2	
Larceny	250	
" and receiving	1	
" and desertion	1	
Malicious wounding	3	
" injury to property	5	
Misdemeanor	2	
Receiving stolen property	12	
Rescuing prisoner	1	
Refusing to support family	1	
Robbery	5	
Sheep-stealing	1	
Shooting with intent	4	
Shop-breaking	6	
Selling liquor to Indians	1	
Trespass	2	
Unlawful wounding	5	
Uttering counterfeit coin	1	
Vagrancy	108	
Total		594

SENTENCES.

One month and under	22	
Over 1 and up to 2 months	42	
Over 2 and up to 3 months	75	
4 months	52	
5 "	20	
6 "	213	
7 "	7	
8 "	12	
9 "	20	
10 "	4	
12 "	69	
13 "	1	
14 "	4	
15 "	1	
16 "	5	
17 "	2	
18 "	17	
19 "	1	
20 "	3	
21 "	2	
22 "	1	
23 "	11	
24 "	10	
Total		594
Average duration of sentence	7.08-30	

OCCUPATIONS.

Agents	4	Hack-drivers	1
Auctioneers	1	Harness-makers	3
Barbers	12	Hatters	1
Bakers	9	Hosiers	1
Basket-makers	2	Hotel-keepers	3
Bartenders	4	Jockeys	3
Blacksmiths	12	Labourers	276
Blacksmiths helpers	5	Leather-cutters	1
Boot-blacks	1	Lock-smiths	1
Bolt-makers	1	Machinists	3
Boiler-makers	1	Masons	2
Broom-makers	1	Moulders	10
Brakesman	1	Painters	27
Bricklayers	2	Photographers	1
Brick-makers	1	Plasterers	5
Butchers	13	Plumbers	2
Carpenters and woodworkers.	24	Polishers	1
Clerks and bookkeepers	22	Printers	6
Cabinet-makers	1	Professors	1
Carters and teamsters	4	Sailors	10
Cigar-makers	6	Salesmen	1
Chemists	2	Sail-makers	1
Cooks	12	Schoool-teachers	1
Coopers	4	Shoe makers	16
Curriers	3	Stone-cutters	7
Engine-drivers and engineers.	3	Tailors	24
Farmers	2	Ticket-agents	2
File-cutters	2	Tinsmiths and tinkers	3
Firemen	2	Travellers, Commercial	4
Fishermen	1	Waggon makers	1
Gardeners	5	Waiters	4
Grocers	2	Watch-makers	2
Grooms and ostlers	5	Total	594

COUNTIES AND DISTRICTS.

Algoma	2	Nipissing	2
Brant	6	Norfolk	4
Bruce	4	Northumberland and Durham	17
Carleton	28	Ontario	5
Elgin	3	Oxford	9
Essex	28	Perth	6
Frontenac	10	Peterboro'	1
Grey	9	Peel	2
Halton	1	Renfrew	4
Haldimand	4	Simcoe	12
Hastings	18	Stormont, Dundas & Glengarry	4
Huron	3	Thunder Bay	9
Kent	14	Victoria	1
Lambton	10	Waterloo	9
Lanark	7	Welland	48
Leeds and Grenville	12	Wellington	8
Lennox and Addington	1	Wentworth	61
Lincoln	28	York	169
Middlesex	34	Total	594

INDUSTRIAL DEPARTMENT.

Return shewing the number of days' work rendered for the year ending September 30th, 1886 :—

Broom shop	22,047	
Tailor "	4,432	
Shoe "	1,900	
Wood-working shop	30,507	
Brickyard	10,989	
Carpenters and painters	2,132	
Tinsmiths and machinists	1,391	
Blacksmiths and helpers	797	
Bricklayers and bricklayers' labourers making permanent improvements	2,417	
General work in yard and grounds	1,732	
Mercer Reformatory	956	
Farm labourers in garden and on farm grounds	3,812	
Total		83,112

DOMESTIC DEPARTMENT.

Return showing the number of days' domestic employment from October 1st, 1885, to September 30th, 1886 :—

October, 1885	1,290	
November, "	1,179	
December, "	1,292	
January, 1886	1,225	
February, "	1,203	
March, "	1,299	
April, "	1,268	
May, "	1,192	
June, "	1,028	
July, "	921	
August, "	945	
September, "	997	
Total		13,839

RETURN shewing the number of days prisoners were in hospital, confined in cells, convalescent and unemployed, from October 1st, 1885, to September 30th, 1886 :—

MONTH.	In Hospital. Days.	Confined in Cell. Days.	Unemployed. Days.	Sick in Cell. Days.
October, 1885	170	273	421	103
November, "	99	167	198	99
December, "	191	133	650	93
January, 1886	235	114	785	108
February, "	251	166	1,098	124
March, "	290	173	490	149
April, "	152	129	429	79
May, "	237	86	67	44
June, "	145	113	98	36
July, "	127	84	69	44
August, "	105	31	91	42
September, "	112	95	65	26
Totals	2,114	1,564	4,461	947

Hospital.

Average number of patients in Hospital per day during each month, from October 1st, 1885, to September 30th, 1886 :—

October, 1885	4.51
November, "	2.90
December, "	5.48
January, 1886	7.38
February, "	8.14
March, "	8.67
April, "	4.13
May, "	7.53
June, "	5.03
July, "	4.19
August, "	3.32
September, "	3.06
Monthly average for the year	5.38

Prisoners in Hospital September 30th, 1886 2

TABLE

Shewing the daily population of the Central Prison during the year ending September 30th, 1886.

	October.	November.	December.	January.	February.	March.	April.	May.	June.	July.	August.	September.
1	357	368	384	367	407	411	400	374	307	288	275	265
2	365	369	384	366	405	410	399	374	306	287	279	272
3	362	365	378	366	402	407	399	368	309	287	275	276
4	362	367	379	382	406	412	399	369	312	287	275	274
5	361	362	376	381	404	412	395	365	311	287	271	274
6	365	363	376	397	426	409	393	367	311	290	267	271
7	360	368	376	385	426	409	400	366	309	[illegible]	260	270
8	362	368	373	392	425	409	402	361	304	286	265	270
9	374	366	373	[illegible]	425	407	400	[illegible]	306	[illegible]	[illegible]	270
10	370	374	[illegible]	385	429	415	[illegible]	[illegible]	299	292	[illegible]	[illegible]
11	370	373	362	387	429	414	[illegible]	[illegible]	[illegible]	292	264	267
12	[illegible]	378	[illegible]	[illegible]	430	413	398	[illegible]	292	[illegible]	[illegible]	267
13	370	382	[illegible]	[illegible]	428	415	395	[illegible]	292	[illegible]	[illegible]	279
14	375	[illegible]	372	[illegible]	[illegible]	415	[illegible]	[illegible]	289	282	[illegible]	276
15	376	[illegible]	370	399	428	415	401	[illegible]	[illegible]	279	[illegible]	[illegible]
16	373	375	373	397	427	413	401	[illegible]	[illegible]	280	266	279
17	374	375	[illegible]	397	426	413	[illegible]	[illegible]	[illegible]	275	[illegible]	277
18	374	372	372	397	426	411	403	[illegible]	[illegible]	275	251	[illegible]
19	369	372	[illegible]	[illegible]	425	409	402	[illegible]	290	273	[illegible]	[illegible]
20	[illegible]	373	370	[illegible]	424	410	[illegible]	[illegible]	[illegible]	273	[illegible]	282
21	370	376	372	[illegible]	424	410	[illegible]	[illegible]	295	278	[illegible]	[illegible]
22	[illegible]	376	371	[illegible]	[illegible]	[illegible]	[illegible]	328	[illegible]	[illegible]	[illegible]	[illegible]
23	365	[illegible]	378	103	424	408	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
24	[illegible]	[illegible]	376	[illegible]	[illegible]	[illegible]	391	[illegible]	297	[illegible]	[illegible]	279
25	[illegible]	378	370	[illegible]	[illegible]	403	391	[illegible]	294	[illegible]	[illegible]	281
26	[illegible]	382	370	402	423	[illegible]	[illegible]	323	291	279	[illegible]	[illegible]
27	371	[illegible]	370	[illegible]	416	[illegible]	[illegible]	[illegible]	[illegible]	276	[illegible]	280
28	370	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	382	[illegible]	[illegible]	277	273	279
29	373	[illegible]	368	[illegible]		398	[illegible]	[illegible]	286	[illegible]	273	287
30	370	[illegible]	[illegible]	407		398	376	313	286	[illegible]	270	287
31	368		[illegible]	[illegible]		399		312		275	280	
Total	11467	11193	11539	[illegible]	11805	12661	11860	10583	8910	8732	8365	8291

Total number for the year	127,555
Highest any one month	12,661
" " day	430
Lowest any one month	8,291
" " day	262
Average per month	10,630
" " day	349

General Summary of distribution of prisoners in the Central Prison, from October 1st, 1885, to September 30th, 1886 :—

Industrial Department	83,112
Domestic "	13,839
Sick in hospital	2,114
Sick in cells and convalescent	947
Confined in cells and under punishment	1,564
Unemployed	4,461
Sundays and holidays (unemployed)	21,518
Total	127,555

Report of the Superintendent of the Sunday School

Toronto, 12th October, 1886.

R. Christie, Esq.,
Inspector of Prisons and Public Charities, Ontario, Toronto,.

Sir,—I have the honour to report upon the work carried on in the Sunday School of the Central Prison during the year ending the 30th ult.

As heretofore, services have been held without intermission every Sabbath morning, and the teaching staff has always been sufficiently large to enable us to conduct the services effectively. Services were also held on Christmas and New Year's morning, and text cards and Christmas letters (the latter sent from prison mission workers in England) were given to the men.

For some months after the destruction of the chapel roof by fire, the services were held in the old dining-hall, but we are glad to be once more in the chapel with its renovated and improved accommodation.

Occasional visitors from England and the United States speak in high terms of the enlightened policy which permits us to carry on our work in this way among the prisoners, and our increasing experience in the work confirms us in our belief in its importance and utility.

The Warden and Deputy Warden, and the Guards have been uniformly courteous and obliging in their intercourse with us, and we owe no small measure of thanks for the pleasure with which our work has been carried on.

I have the honour to remain, Sir,
Your obedient servant,

Hamilton Cassels,
Supt. C. P. S. S.

Report from the Prisoners' Aid Association.

October 22nd, 1886.

R. Christie, Esq.,
Inspector of Prisons and Public Charities.

Sir,—I have the honour to present herewith the Reports of our work for the year ending September 30th, 1886, covering the different departments, of the work undertaken by us in the Government prisons, and including our statements and receipts of expenditure. In addition to the work covered by these reports, the Association has assisted 841

discharged prisoners, found employment for 311, given provisions to forty families, and 105 articles of furniture to enable many of them to commence housekeeping, paid rent for 33, distributed 428 articles of clothing, provided tools and materials for 33, paid fare to the homes or to where employment could be obtained for 39; 3,066 meals have been given in the home on Bay street, where 500 have received temporary shelter. Loans to the amount of $593.15 have been advanced of which $507.19 have been repaid, the sum of $76.50 has been paid on account of board, making a total of $583.69 returned.

We would call special attention to the practical and beneficial results of our system of loaning money, as a method of assistance.

A large number of those aided are doing well; some having a considerable sum of money saved from their earnings in the bank. We are happy to be able to report that the benefit of our inside work in the prisons, is this year become very marked as shown by the willingness of men to return to their own homes and retrieve their characters there, instead of throwing themselves into different cities, as has been the case with so great a proportion in former years.

From all we can learn, the work of this Society is the most effective of any organization of the kind on this Continent.

S. H. Blake,
President.

Prisoners' Aid Association.

Receipts for twelve months ending September 30th, 1886:

Government grant	$1,000 00
Municipal grants	260 00
Subscriptions	276 00
Loans	312 65
Broom industry	11 35
Collected at annual meeting	14 62
Total	$1,874 62

Disbursements for twelve months ending September 30th, 1886:

Food, lodging, clothes, tools, furniture, railway fares, rent, etc., to 688 ex-prisoners	$1,080 58
Central Prison night school, Master's salary, books, etc	198 72
Books, etc., for Sunday Schools at Andrew Mercer Reformatory and Central Prison	92 58
Printing, advertising, stationary, postage, etc	105 14
Paid on the Bay Street property, and for insurance and interest	300 80
Water, light and fuel	69 20
Sundries, bank commission, etc	33 22
Agent's salary	500 00
Total	$2,380 24

Central Prison Schoolmaster's Report.

To the President and Members of the Prisoners' Aid Association:

Gentlemen,—Owing to the unfortunate fire which took the roof off and otherwise damaged the chapel building, in which our classes have, up to the present time, met, and the Warden's inability to provide me other safe accommodation, I reluctantly had to adjourn our meetings over the months from April to August inclusive, consequently my present report (the 7th) will only cover seven months of the fiscal year.

I am informed that 594 men have been admitted into the Prison during the twelve months ending with September, 1886; out of which number 498 could read and write, 23 read only, and the remaining 73 had no education.

The number of the names upon the school roll, with average attendance, compared with the population of the Prison upon the first day of each of the seven above-mentioned months, upon which day the new pupils are admitted, were as follows:—

	Number in Prison on 1st of month.	Discharged during the month.	Number on the School Roll.	Pupils discharged during month.	Pupils died.	Average nightly attendance.
October, 1885	357	59	62	6		51
November, "	368	63	62	3		51
December, "	384	53	55	4		37
January, 1886	367	37	92	1	1	73
February, "	407	31	98	3		75
March, "	411	50	78	1		64
September, "	265	40	43	0		38

The total number of men who have attended the school from its commencement in 1883 to the present date is 477. Out of these 141 were new pupils during the period covered by this report.

On comparing these figures with the preceding year's statistics, it will be found that whilst the number of men confined in the Prison upon the 1st of the months of October, November and December were slightly increased, yet on the same days of the remaining months, there was a notable decrease, and notwithstanding this, if we except September the month of resuming the classes, when it must be remembered 57 of the old pupils had been discharged during the adjournment, the average nightly attendance will be seen to be nearly one-half as many more men. The disproportion between the number on roll and average nightly attendance in the months of December, January and February was caused largely by matters over which the men themselves had little control; as, for instance, during those months it was necessary to strike off the names of many of the most advanced men on account of the large classes.

As a further evidence of the manner in which the school is appreciated, I extract from one of many similar letters I frequently receive from the men, the following:—"I am very glad to come up in my idle time. I see in my last month's exercises I have made a great many mistakes; hope that will not be so this month. I am trying to do my best; I am glad to think that I can work subtraction a little, just learned it since I have come to you. I thank you so much Mr. Pritchard; I will try my best while I come to you, so there will be great encouragement to you and me." These are his own words, with the spelling corrected. The writer had not then been attending the school two

months. To this I may also add,—very few of the men leave the school without first expressing their thankfulness to me for the advantages they have derived therefrom.

Outside of my regular school duties, I started the publishing of a little sheet named *The Echo*, at the commencement of the year and, through the kindness of the Warden this has been distributed to each of the men in the Prison who are entitled to privileges every week since. By this means I endeavour to stir up a taste for wholesome reading and bringing before them things which it may be useful for them to know. I shall be happy to send a specimen copy to any person who may request it. This step, I have reason to believe, is duly appreciated by all, and I am informed by the distributing guards that *The Echo* is eagerly asked for.

All of which is respectfully submitted.

Your obedient servant,

J. J. PRITCHARD,
Schoolmaster.

Toronto, October 1st, 1886.

REPORT OF THE SURGEON OF THE CENTRAL PRISON FOR THE YEAR ENDING SEPTEMBER 30TH, 1886.

ROBERT CHRISTIE, ESQ.,

Inspector of Prisons and Public Charities for Ontario.

SIR,—I beg to submit my Annual Report.

The health of the prisoners during the year has been generally very good, with the exception of an unusually large number of cases of inflammation of the throat in early spring—the inflammation occasionally producing abscess in the tonsils, and in the external ear. In Toronto, at the same time, there was much sickness in private families of a diptheritic nature; from this the prison was free. The summer diseases were very few and of mild character.

In the course of the year there were, as heretofore, many cases of rheumatism, involving much loss of time to the prison.

There was no death during the year.

Prisoners are still received here under direct sentence, who are unfit for prison labour; for instance, old toothless men, cases of insanity, some mild, some recurrent, but not recognized, it is presumed, as such before receiving sentence. Many of the latter cases are the result of masturbation, and not likely to recover. The vicious habit is often, if not generally, continued within the prison, and produces feeble circulation, much neuralgia, and unwillingness to work. No doubt cases of this kind, whether within or without the prison, are weak, as the cold, blue, clammy hands testify. Outside the prison, these complainers will try and avoid all work that is at all laborious. In the prison they try to do the same, but their appeals are humanely refused, as it is well known that daily work, graded according to the strength of the system, is one of the best aids, where the mind is willing, in antagonizing the evil practice.

In my report of the year 1875, I remarked as follows:—"In explanation of a large number of cases of neuralgia, (occurring not in women, but in men, as the former are not admitted here), it may be observed that very many of the prisoners are, or have been, addicted to the practice of self abuse, which is a well known cause, in both sexes, of nervous diseases, of neuralgia of the chest, side, spine, and other parts of the body.

"If the Government or Legislature would appoint a commission to collect evidence upon the avoidable causes of crime, disease and death in this province, a mass of the most valuable information to our people might be obtained. And I think there is little doubt that, as one of the results of such inquiry, it would be shown that self-abuse dis-

poses to crime, as well as insanity; and also that, directly and indirectly, the cost to Ontario from the various evil effects of the vice is more than $100,000 per annum. That this is not an over estimate, will be apparent if we consider—

1st. The cost of all the insane in our asylums, and criminals in our prisons, from this cause;

2nd. The loss of their labour and other services to the country;

3rd. The loss of the labour of the growing crops not yet ready for the asylum and the gaol; for these cases entertain the conviction that they cannot work;

4th. Expenses in caring for them;

5th. Expense in seeking medical and other aids for the various diseases having their origin in the vice;

6th. The care of permanent invalids at home, in hospitals, etc.

"The evil exists, and will increase. It must be combatted sometimes. By silence and inaction the state loses money, and morality too. Manhood and womanhood are humiliated. It may not be easy to provide such a plan as will prevent the evil, but I believe that to a very large extent, say in seventy-five per cent. of the cases, it might be avoided by the constant employment of two or three judicious and intelligent medical men to lecture throughout every part of the province on various sanitary measures, and also to communicate suitable instruction to parents and others having the charge of children. The cost to the country would be as nothing compared to the value received."

Since that time a Committee of our Legislature, presided over by the late lamented Hon. Adam Crooks, met and collected information, and our excellent Board of Health has been established, and has acomplished a vast amount of good, but does not combat efficiently, if at all, the above vice; and the recommendation in the quotation is just as urgent now as it was then. If the lectureships above spoken of, were established by the Government, the lecturers to work in harmony with or under the Board of Health, an immeasurable amount of good would result to our province.

In lectures to men alone, and to women alone, let likenesses of the friendless, incurable imbeciles in our lunatic asylums, brought to that condition by unnatural practices, be thrown upon the canvas so as to strike horror into the young, and unquestional good would result.

Again, take consumption, which, to a large extent, is a dirt disease, resulting chiefly from the inhalation of avoidable impurities in air, and which causes in our beautiful and healthy Province of Ontario a mortality of about two thousand five hundred cases a year. I believe more than one thousand cases a year of these avoidable deaths may be charged directly and honestly against school-rooms and bed-rooms.

Excretions from the bowels, kidneys and skin, are more or less properly disposed of, and inattention in this respect is looked upon with condemnation; but as regards the excretions from the lungs, because they cannot be seen, people will arrange places of abode which are calculated to bring back again into their blood nuisances which God, by His delicate and efficient physical processes, is constantly throwing out from it. And yet they would say that the man who would drink of the fluid secreted by his own kidneys, as lunatics sometimes do, should be put into an insane asylum. Now, as regards tendency to consumption, one of the worst impurities that a man can inhale is that which by infinite skill is continuously exhaled.

These lecturers, by illustrations and experiments, always trying to address the eye, and thus securing large audiences, could show clearly to the most ordinary intellect, how children in our school-rooms could, without danger, be breathing air, *continuously* pure, and in winter of a pleasant temperature: how the third of life, and more, which is spent in the bed-room, can be passed inhaling air, *continuously* fresh and pure, without the slightest danger of taking cold: how, thus, croup, sore throat, diphtheria, erysipelas, consumption, etc., could be largely, if not entirely, avoided.

These lecturers could not be engaged in general practice, would be mostly away from home, and should be first-class men in every respect. If, as remuneration, they received even five thousand dollars apiece per annum, besides the expenses for illustration,

travelling, etc., it would be the cheapest outlay provided by our good Legislature, for any service in the Province.

To save thousands of lives every year would be worth a good deal of expenditure.

ANNUAL RETURN OF THE MEDICAL DEPARTMENT OF THE CENTRAL PRISON.

The following list indicates the applications made by prisoners at work for treatment, and their diseases :—

DISEASE.	No.	DISEASE.	No.
Abrasions	4	Eczema	8
Acne	8	Eruptions, cutaneous	109
Abscess	30	Erysipelas	1
Anorexia	311	Epistoxis	6
Ague	29	Feverishness	26
Agnish	58	Flatulence	40
Asthma	16	Goitre	18
Barber's Itch	30	Gonorrhœa	69
Boils	40	Gleet	26
Bubo	4	Hæmoptysis	16
Bronchitis	16	Hæmorrhoids	42
Burns and Scalds	6	Headache	146
Catarrh, nasal	101	Hernia	29
Complaining	131	Indigestion	334
Cornea	18	Inflammation of nose	2
Conjunctivitis	46	do hand	4
Constipation	1800	do glands	16
Contusions and Wounds	68	do arm	8
Convulsions	2	do finger	14
Congestion of brain	1	do knee	2
Cramps	190	Insanity	12
Coughs and colds	1400	Insomnia	86
Debility	180	Irritability of bladder	16
Diarrhœa	120	Ingrowing nail	6
Dysentery	30	Jaundice	1
Dysuria	44	Leucorrhœa	46
Epilepsy	28	Nervousness	18

Diseases—*Continued.*

DISEASE.	No.	DISEASE.	No.
Neuralgia	210	Sunstroke	1
Nausea	12	Sprains	40
Orchitis	16	Stricture of urethra	76
Otorrhœa	14	Scrofula	6
Pains (alleged and simple in various parts of the body)	402	Syphilis, primary	16
Paralysis, partial	6	do secondary	82
Pediculosis	64	Toothache	213
Phthisis	1	Teeth extractions	120
Pleurisy	6	Teeth extracted and replaced	6
Phymosis	2	Typhoid fever	1
Pneumonia	2	Ulcers	54
Rheumatism, mild	210	Vertigo	41
do inflammatory	20	Varicocele	4
Scabies	45	Varicose veins	3
Sciatica	10	Vomiting	16
Sore throat, simple	96	Whitlow	4
do syphilitic	12	Warts	8
Spermatorrhœa	32	Worms, tape	5
		do pin	8

ANNUAL RETURNS OF THE CENTRAL PRISON HOSPITAL.

Showing the number of prisoners admitted into Hospital, and the diseases for which they were treated :—

DISEASE.	No.	DISEASE.	No.
Abscess	1	Otorrhœa	2
Acne	1	Pneumonia	3
Asthma	2	Rheumatic pains	19
Bute	1	Rheumatism, inflammatory	10
Cramps	5	Scabies	1
Contusions and wounds	9	Stricture of urethra	6
Concussion of brain	1	Scrofula	1
Coughs and colds	38	Sore throat	6
Conjunctivitis	2	Sunstroke	2
Constipation	5	Typhoid fever	1
Diarrhœa	4	Tonsilitis	4
Debility	6	Ulcer	1
Dyspepsia	5	Vomiting	2
Dysuria	1	Sprains	1
Eruption	1		
Hæmoptysis	4	OPERATIONS.	
Hernia	1		
Hæmorrhoids	2	Hæmorrhoids	1
Heart disease	3	Tumor	1
Insane	1	Hernia	1
do temporary	3	Amputation of fingers	2
Ingrowing nail	1		
Inflammation of bowels	1	VACCINATIONS.	
Jaundice	1		
Lumbago	6	Guards	19
Neuralgia	2	Prisoners	346

No one of the prisoners in this Institution died within the year.

The average number of patients in the hospital per diem for each month from the 1st October, 1885, to the 30th September, 1886 :—

October, 1885	4.51
November, "	2.90
December, "	5.48
January, 1886	7.38
February, "	8.14
March, "	8.67
April, "	4.13
May, "	7.53
June, "	5.03
July, "	4.19
August, "	3.32
September, "	3.06
Average per diem for the year	5.38
Number of patients in hospital September 30th, 1886	2

I have the honour to be, Sir,
Your obedient servant,

W. T. AIKINS, M.D.,
Surgeon to the Central Prison.

ANDREW MERCER REFORMATORY FOR FEMALES.

As there was a decrease in the number of female prisoners committed to the common gaols of the Province during the year under report, it is but natural that there should be also a reduction in the number of women sentenced or transferred to the Reformatory. The commitments, as will be seen in the summary given below, were 123, as against 142 in the preceding year. In the year before that again the committals were 156 in number. I sincerely trust that this reduction is really an indication of an improvement in or a lessening of the class from which the majority of the women committed to the Reformatory are drawn, and not that the Reformatory is simply acting as a deterrent from crimes and offences, through fear of it as a place of confinement and discipline. I hope that this reduction is due in part to the reforming influences brought to bear upon those women who have been in the Reformatory, some at least of whom must have been led to see the error of their former life.

Be the cause what it may, there certainly has been of late years a considerable dimunition in the percentage of female prisoners on the total number committed. In 1869 for instance, the women represented 29.70 per cent. of all the prisoners; in 1874, 18.41 per cent.; in 1879, 15.65 per cent.; in 1884, 14.22 per cent.; in 1885, 13.19 per cent., and in 1886, 13.28 per cent.

The average period of sentence passed upon each of the prisoners during the past year was 10.19 months, and this is but a short period for reformatory influences to be at work, considering the length of time which evil habits have had to form themselves in. It is a pity that as regards those women committed for drunkenness time and again, that after the first commitment a long sentence is not imposed. In this way, a greater chance would be given to thoroughly wean the prisoners from their evil habit.

To the Industrial Refuge for girls, sixteen children were admitted during the year, as against three on the preceding one. I am glad to note this increase in the commitments to the Refuge, and I hope to report a larger increase next year, as I feel sure there are still many young girls running wild in the public streets who would receive life-long benefit by timely committal to the Refuge. During the year, homes were found for three of the older girls who were sufficiently trained in household duties as to be fit to take their part in the battle of life, and they were apprenticed to persons of good character and standing until the expiration of the period of sentence. The conduct of two other girls had been specially good since their committal, and recommendations were made for their discharge prior to the expiration of the full period of sentence.

I append summaries of the movements of the inmates of the Reformatory and Refuge during the years 1885 and 1886:—

REFORMATORY.

	1885.	1886.
Number of inmates at beginning of year (1st Oct.)..	120	114
" " since admitted.....	142	123
Total number in custody during year.....	262	237
Discharged on expiration of sentence.....	141	137
" payment of fines	1	....
" remission of sentence	3	2
Re-transferred to Common Gaol	1	....
Transferred to Lunatic Asylum	....	1
" Refuge for girls	....	2
Died.....	....	1
Escaped	2	....
	148	143
In custody at close of year (30th Sept.).....	114	94

REFUGE.

Number of inmates at beginning of year (1st Oct.)..	43	35
" " since admitted.....	3	16
Returned from apprenticeship.....	1	1
Total number in residence	47	52
Discharged on expiration of term	2	8
" warrant of Lieutenant-Governor	4	2
Apprenticed by order of Inspector.....	5	3
Ran away	....	2
Transferred to Reformatory.....	1	....
" Asylum	....	1
	12	16
In residence at close of year (30th Sept.).....	35	36

Full particulars regarding the women and children committed to the Reformatory and Refuge during the year, are given in the tables attached to the Superintendent's report.

Maintenance Expenditures.

The cost of maintaining the Reformatory and Refuge is shewn in the table given hereunder:—

Service.	Year ending 30th September, 1885.		Year ending 30th September, 1886.	
	Total expenditure.	Average daily cost per inmate.	Total expenditure	Average daily cost per inmate.
	$ c.	cents.	$ c.	cents.
Hospital expenses	174 39	0.29	165 93	0.30
Butcher's meat and fish	2,703 17	4.59	1,931 85	3.50
Flour, bread and meal	1,690 67	2.87	1,498 80	2.71
Groceries	3,228,81	5.49	3,162 71	5.73
Bedding, clothing and shoes	2,360 01	4.01	2,047 59	3.71
Fuel	2,875 97	4.89	2,127 95	3.86
Gas, oil, candles and matches	766 43	1.30	533 29	0.97
Laundry and cleaning appliances, and water	1,631 68	2.77	1,942 50	3.52
Stationery, advertising, printing and postage	402 18	0.69	400 47	0.72
Library, schools and lectures	423 71	0.73	409 37	0.74
Furniture and furnishings	641 22	1.09	521 58	0.94
Stable expenses, forage, etc	324 32	0.55	256 33	0.47
Repairs, ordinary	308 29	0.52	647 16	1.18
Grounds and garden	465 89	0.79	909 98	1.65
Unenumerated	835 26	1.42	838 57	1.52
Salaries and wages	8,708 89	14.80	9,298 86	16.84
Totals	27,540 89	46.80	26,692 94	48.36

Industrial Department.

Owing to the decrease in the number of inmates, the Industrial Department does not make such a good shewing as in previous years, so far as revenue is concerned, but still the great object of keeping the inmates steadily employed was attained. The cash revenue was also reduced this year by charging to the laundry a larger proportion of the water than formerly.

The following summary shews the number of days worked in each of the branches, and the amount of revenue derived therefrom.

Sewing Department.

No. of days worked, 1,577.

Total revenue	$532 46	
Less cost of materials, and repairs to machines	144 84	
Net revenue		$387 62

Daily earnings of each inmate employed, 24.57 cents.

Laundry Department.

No. of days worked, 6,708.

Total revenue	$3,017 25	
Less cost of materials and water	1,153 21	
Net revenue		$1,864 04

Daily earnings of each inmate employed, 27.78 cents.

Knitting Department.

No. of days worked, 1,946.

Total revenue	$239 35	
Less cost of material	112 15	
Net revenue		$127 20

Daily earnings of each inmate employed, 6.53 cents.

Making up Clothing for Inmates.

8,329 days at 25 cents per day	$2,082 25	
Clothing for inmates on discharge	123 83	
Total		$2 206 08

The gross and net earnings of the different branches were :—

	Gross.	Net.
Sewing branch	$532 46	$387 62
Laundry "	3,017 25	1,864 04
Knitting "	239 35	127 20
Total revenue	$3,789 06	$2,378 86
Making clothing for inmates, etc.		2,206 08
		$4,584 94

MINUTES OF INSPECTION.

Copies of my reports both upon the Reformatory and Refuge are annexed :—

"I made an inspection of the Reformatory for Females on the 16th April, when the inmates numbered 118. They were employed as follows :—

Sewing and laundry work from which revenue is derived	24
Learning to sew and knit, or repairing and washing and ironing clothing for the Reformatory	62
House and corridor cleaning	15

Kitchen, bakery, dining-room, nursery and house laundry	10
Wholly incapable :	3
Sick	3
Under punishment	1
	118

"The health of the inmates was reported to be generally good, and no case of sickness existed.

"A noticeable characteristic, however, of the present population is the large number who are without the simplest knowledge of any kind of ordinary employment, such as females are usually familiar with. Many of them are comparatively young, and this may in some measure account for their lack of such training. It is worthy of note, however, that a large number of those now in the Reformatory have drifted into criminal ways through not having been trained to habits of industry in their own homes.

"No occurrence of an extraordinary nature has taken place since the date of my last inspection, affecting the discipline or general routine of the Institution.

"An examination of the record shewed that the punishments and deprivations have not been frequent or severe, and the conduct of the inmates generally has been good.

"The industries carried on are in a moderately prosperous condition, the laundry work especially has given satisfaction, and a very considerable number of the inmates have been employed. Some difficulty has been experienced, however, in keeping up a supply of such needle work as will furnish suitable employment for the inmates who are detailed for that work, and in consequence the earnings of the Institution from this source has been materially lessened.

"The premises were in good order, and the interior of the building was thoroughly clean in all its departments.

"The stores department was in order, and the Bursar's books well kept; shewing a complete record of all financial transactions connected with the Institution.

"I made an inspection of the Reformatory for Females, Toronto, on the 2nd November, and found that there were 88 inmates under charge on that date, distributed as follows:—

Knitting	20
Laundries (City and Central Prison)	38
Repairing own clothing	2
Sewing and mending for Reformatory	9
House and corridor cleaning	6
Kitchen	1
Bakery	2
Dining-room	2
Nursery	1
Incapable	3
Sick	2
Convalescent	1
Under punishment	1
Total	88

"On the corresponding date of the previous year there were 123 inmates, shewing a decrease of thirty-five. No specific reason can be assigned for this reduction in number, except that there is good ground for the assumption that some of those who had been committed frequently have finally left the country, thereby lessening the class of incorrigibles. The records shewed that there are now under charge sixty-one persons who have been committed for the first term; eighteen for the second term; five for the third term; two for the fourth term: and two for the sixth term.

"According to the punishment records, it has not been found necessary to resort to any very severe punishment in order to maintain the discipline of the Reformatory. During the previous year there were fourteen dark cell punishments, against three during the year which closed on the 30th September last. The evidence of the records also shews that three who have been committed for their second and subsequent terms, were much more amenable to the rules and discipline of the Institution, and the smaller number of dark cell punishments is attributed to this cause.

"Of the present population there were three who, from physical or mental defects were totally incapable of working actively at any employment, and three others of the same class, almost to an equal extent, unfit for any physical effort; and five others who cannot do any useful work which could possibly add to the revenue of the Institution. This imbecile class appears to be increasing, and their presence here is in no way promotive of the interests of the Institution as a reformatory, as, in consequence of their inability to comprehend the simplest rule or attempt at system, it is more difficult to restrain the more intelligent inmates.

"The sick room, I found, had been closed since the 5th October, and previous to that date the general health had been exceptionally good throughout the past summer.

"I found the Reformatory building in excellent order throughout. The corriders, halls, rooms and cells, were clean and neat.

"The food was substantial and well prepared, and no complaints were made to me by the inmates regarding it, or any matter affecting their treatment by the officials of the Institution.

"Some minor structural improvements and alterations have been made internally. The only matter of this kind, of importance, was the building of a brick oven to displace the range at present used for that purpose, and for which work an appropriation has been made. It is well advanced toward completion, and I have no doubt it will prove to be an economy, and will turn out a much superior quality of bread.

"An examination of the books shewed them to be neatly and properly kept, both in the administrative and in the Bursar's departments. Economy and care appeared to be practiced, at the same time having a due regard to the efficient working of the Institution, and although the greatly reduced population would, as a rule, somewhat increase the *per capita* charge, the returns shew that but little increase in cost per day's stay of the inmates has resulted, and the gross expenditure for the maintenance of the Institution will be considerably reduced."

Industrial Refuge for Girls.

"I made an inspection of the Refuge on the 26th May.

"There were thirty-nine girls in charge. Five of the older girls are, however, always selected for employment in the household duties of the officers quarters in the Reformatory building. This arrangement, since its inception, has given great satisfaction and has done much in training the girls

in that class of work, and eventually fitting them for taking positions where they can successfully maintain themselves after their removal from the Institution.

"All the inmates were in good health, and appeared neat and cleanly as usual. The apartments they occupy were also in excellent order.

"The school room classes were engaged in their studies at the time of my visit, and were most orderly and correct in their deportment.

"More special attention has been given of late to practical training in the various branches of household work, together with needlework, and a general knowledge of industrial work of that character, and the results so far have been very satisfactory."

"I made a second inspection of the Refuge on the 2nd November.

"There were on that date thirty-eight inmates under charge, all of whom were engaged in house-cleaning operations, and the work appeared to be going on satisfactorily. It was reported to me that good progress was also being made in the school-room and in the acquirement of knowledge of ordinary household duties.

"The punishment records shewed but few entries, and but for one or two who have been more or less incorrigible and of necessity frequently corrected, the remainder can scarcely be said to have received any punishments or had any deprivations during the past year, and for two months past no punishments have been found necessary. The general appearance of the Refuge and the inmates are ample indication of thorough supervision and kindly treatment and consideration for the best interests of the children."

REPORT OF THE SUPERINTENDENT.

Toronto, October 10th, 1886.

R. Christie, Esq.
Inspector of Prisons and Public Charities.

Sir,—I have the honour to submit to you the sixth annual report of the Andrew Mercer Ontario Reformatory for Females and Refuge for Girls, for the year ending September 30th, 1886.

The general conduct of the inmates has been satisfactory; as a rule discipline has been well maintained.

In referring to the Prison's offence book, I find the number of punishments recorded is one hundred and twenty three, being less than last year, while punishment by confinement in dark cell has been resorted to only three times, as against fourteen in the preceding year.

The majority of the inmates are never punished. Some of those well behaved women frequently ask me if there is any probability that some of their time will be remitted for good conduct.

Every year since this Reformatory has been in operation, I have hoped that those vested with authority would introduce a law, by which our inmates could merit this remission of sentence. In the event of such a law being passed, I would ask that this clemency be extended only to those who have never been reported for any infringment of the Reformatory rules, provided they are serving their first term of imprisonment in the Reformatory, and that this term of sentence is of one year and over. The hope of having the sentence shortened, ever so little, by their own efforts would I feel sure prove a strong incentive to good conduct.

The number of inmates discharged on expiration of sentence is 137; nineteen were taken in charge by Mrs. Harvie and teachers of the Sunday School, seventy-one returned

to friends, twenty-three went back to their former evil lives, five went to the Convent of the Good Shepherd, Parkdale, one to the Industrial Refuge, North Toronto, three found situations for themselves, three were sent to the General Hospital, one was taken in charge by an officer of the Salvation Army, eleven were placed in situations by members of the Reformatory staff.

We strive to keep the discharged inmates in view, as far as we can. Sometimes the best behaved while in the Reformatory prove to be very weak and incapable of resisting temptation when released. Every member of the staff does her utmost to help and encourage discharged inmates.

You will observe the great decrease in the manufacturing operations, viz.:—Pant and shirt making.

During the months of February and March there were very few orders from the wholesale houses, and during the whole year orders have been scarce. This is not to be attributed to work badly done, for on all occasions when work has been sent the utmost satisfaction has been given.

During the months when work from the wholesale houses was scarce the inmates were employed in knitting and making up clothes for Reformatory use. It is often a matter of surprise to me that these women work so well and diligently. It is very unusual for any of them to be punished for refusing to work.

The following is a list of articles made during the year:—

Pants	1,178	Dresses	70
Vests	36	Towels	204
Shirts	573	Infants' clothing (articles)	25
Flannel skirts	493	Boys' suits	6
Aprons	214	Stockings.....pairs	756
Underwear	326	Socks.....pairs	575
Sheets	375	Stockings footed	154
Pillow-slips	226	Mitts	40
Quilts	24	Unenumerated	112
Table linen	62		

The laundries—City, Central Prison and house—have done good work; very few complaints are ever made for bad laundrying. Clear starching and ironing are as well done as any I have seen in the city laundries.

At nine o'clock on Sunday morning the usual Sunday School classes have been faithfully and zealously attended by W. H. Howland, Esq., Mrs. Harvie, and her efficient staff of lady teachers; great interest is evinced by the inmates in these classes. As in former years, clergymen of the Ministerial Association, hold services every Sunday afternoon at four o'clock and every Tuesday evening at half-past six.

At half past ten mass is celebrated every Sunday morning by a priest from St. Michael's Cathedral, followed by an instruction. Catechism classes are held on Sunday afternoon and Tuesday evening, for the benefit of the Roman Catholic portion of the inmates.

During the winter months all inmates under eighteen years of age receive instruction in reading, writing and arithmetic for an hour and a half every morning; an hour is given four nights during the week for the benefit of the older women who cannot write nor read.

A few additions to the library would be acceptable. As a rule, great care is taken of the books.

The general health of the inmates has been good. The Physician, Dr. John S. King, is most kind and attentive in the performance of his duties; he visits the Institution every morning. Independant of the more important work of looking after those who are ill, we find this daily visit most useful, as it no doubt prevents the indolent women from feigning illness and has helped materially in keeping up a strict reformatory discipline.

One woman died from gangrene, August 13th; she had been an inmate of the hospital from May 15th.

We may also note that the hospital was closed from April 9th until May 11th. The daily average number of infants is more than in any former year.

In residence October 1st, 1885	4
Entered with mothers during the year	2
Born in Reformatory	1
Total	7
Left with mothers	4
Remaining in nursery	3
Total	7

For greater convenience, the surgery was removed from the fourth to the third flat. The old surgery is used for a nursery as well as the room formerly occupied for that purpose.

In the work-rooms of the south wing, ventilating pipes have been introduced and the water-closets have been partitioned off. In the east wing, a ventilating pipe alone was necessary to make the air pure. A new hot water boiler was put in, the old one being worn out. A refrigerator for milk and butter was purchased. These improvements have been found to be most satisfactory.

October 16th, Assistant Engineer, John Barry, resigned, and John Guyette was appointed to fill his place; Arthur Ewing was appointed as gardener, June 1st.

The resignation of Attendant Sloane, in November, and the promotion of Attendants Maloney and Madden, and the appointment of Annie Reardon as housemaid, are the only changes that have taken place in the staff during the year. I here desire to acknowledge with gratitude the able co-operation that has been given me by every member of the Reformatory staff.

We often deplore the short time the law gives us to try and benefit our inmates. This is felt especially in the case of those addicted to drinking. Ordinarily these inebriates are sentenced for six months and they go out with appetites sharpened by a brief compulsory abstinence. In 1884, the average period of sentence awarded by the courts to women admitted to the Reformatory during that year was 10.58 months; in 1885, 10.76 months; in 1886 10.19 months. In Massachusetts, I see that a maximum sentence of two years for women who had before been convicted of drunkenness is given. If our law makers in Ontario could be induced to provide for the imposition of long sentences for inebriates, we might hope for better reformatory results.

We are glad, however, to note that there has not been as many re-committals during the past year, giving us some hope that our work has not all been in vain.

Refuge Branch.

The year opened with thirty-five children in residence.

I am glad to note a large increase in the number of admissions, sixteen being received while the year before there was only three. Another cause of congratulation is that a fair proportion of this number are children under eleven years of age. It is obvious that better results can be hoped for with children of this age than with those who are older.

The placing of a child in the Refuge has often been the turning point between a life of crime, and a respectible honest future.

It is certainly more desirable to prevent crime than to punish it, consequently it has been a matter of surprise and regret to me that so few are sent to the Refuge.

Notwithstanding that the majority of the girls are of very limited capacity, great progress has been made in the classes during the year. Efforts are constantly made to stimulate them to application in their studies.

Care is taken to give our children good domestic training, and in teaching them habits of cleanliness and order, they are trained to be cooks and housemaids.

Knitting and sewing by hand and sewing-machine is taught. The following is a list of articles made during the year :—

Dresses	79	Sheets	59
Skirts	34	Pillow cases	84
Aprons	75	Towels	34
Night dresses	28	Stockings, prs	71
Underware	125	Unenumerated articles	146

The children enjoy the same religious services as the inmates of the Reformatory. During every service in the chapel screens are placed between the women of the Reformatory and the children of the Refuge.

A want is felt for reading matter for the older girls during recreation hours. They are provided with bibles, catechisms and school books; but as almost all young girls have a craving for tales of fiction, a judicious selection of such works having a moral tendency is much to be desired. The girls of the Refuge are not allowed to use the books of the Reformatory library.

I am sorry to be obliged to report that two of the girls ran away from the Refuge. The first left between six o'clock and quarter past on the morning of June 2nd. After an investigation we found that no blame could be attached to any one in charge; every effort up to the present has been unavailing to recapture this girl. The second ran away in the evening of August 27th, about eight o'clock. She was brought back by the Assistant Engineer, October 1st.

There is nothing to prevent these girls from running away at any time that they find the restraint irksome, as the doors are locked only at night.

The Staff at the Refuge is the same as last year; they continue to work faithfully and conscientiously in the discharge of their arduous duties.

I have the honour to be, Sir,
Your obedient servant,

M. J. O'REILLY,
Superintendent.

ANNUAL STATISTICAL REPORT OF THE ANDREW MERCER ONTARIO REFORMATORY FOR THE YEAR ENDING SEPTEMBER 30TH, 1886.

Number of inmates October 1st, 1885	114	
" " since received	123	
Total number of inmates		237
Discharged on expiration of sentence	137	
" by remission of sentence	2	
Died	1	
Transferred to Lunatic Asylum	1	
" Refuge	2	
Remaining in custody, September 30th, 1886	94	
		237

Nature of Sentences.

Sentenced direct to Reformatory	97	
" to common gaols	26	
		123

Nationalities.

England	16
Ireland	24
Scotland	4
Wales	1
Canada	72
United States	6
	—123

Religious Denominations.

Episcopalians	47
Roman Catholics	44
Presbyterians	8
Baptists	5
Methodists	19
	—123

Social Condition.

Married	49
Single	74
	—123

Temperate or Intemperate.

Temperate	45
Intemperate	78
	—123

Education.

Read and write	59
Read only	26
Neither read or write	38
	—123

Ages.

Under 18	22
From 18 to 20	22
" 20 " 30	37
" 30 " 40	23
" 40 " 50	11
" 50 " 60	7
" 60 " 70	1
	—123

Sentences.

For 3 months	4
" 4 "	2
" 6 "	63
" 7 "	2
" 8 "	1
" 9 "	2
" 12 "	24
" 15 "	2
" 16 "	1
" 18 "	4

For 19 months	1
" 20 "	2
" 23 "	9
" 1 year and 340 days	1
" 1 " 360 "	5
	—123

Crimes.

Concealment of birth	1
Disorderly	3
Drunkenness	8
Drunk and disorderly	4
" " and creating a disturbance	1
Drunkenness and vagrancy	4
Frequenting a disorderly house	6
" house of ill-fame	1
Inmate of a house of ill-fame	7
Keeping a disorderly house	10
" house of ill-fame	8
Larceny	17
" and receiving stolen goods	1
Prostitution	3
" and vagrancy	2
Receiving stolen goods	1
Vagrancy	45
Vagrancy, drunk and disorderly	1
	—123

Occupations.

Charwomen	5
Cooks	2
Dressmakers	2
Housekeepers	10
Laundresses	1
No occupations	16
Peddlers	1
Prostitutes	38
Seamstresses	1
Servants	45
Tailoress	1
Whitewasher	1
	—123

COUNTIES from which Inmates were received.

COUNTIES.	Sentenced direct to Reformatory.	Sentenced to Common Gaols and subsequently removed.	TOTAL.
Brant	2		2
Bruce	2		2
Carleton	5	1	6
Elgin	1		1
Essex	4		4
Frontenac	10		10
Grey	1	4	5
Hastings	1		1
Kent	2	2	4
Lambton	1	2	3
Leeds and Grenville	1		1
Middlesex	3		3
Northumberland and Durham		3	3
Oxford		1	1
Simcoe	2		2
Thunder Bay District	2		2
Welland	1		1
Wellington	1		1
Wentworth	18	3	21
York	40	10	50
Total	97	26	123

NUMBER OF DAYS' WORK DONE BY INMATES DURING THE YEAR.

Industrial Department.

Knitting to fill orders	1,946½
Shirt and pant making	1,576¾
Laundry (City and Central Prison)	6,707¼
	10,230½

Domestic Labour.

Corridor and house cleaning	2,706¾
Cooks	361½
Bakery	854½
Dining-room	1,223½
Laundry inmates and staff	2,839½
Learning to sew	1,267
" knit	594
Sewing, mending and knitting for Reformatory	8,329¾
" own clothing	378
Nursery (attending infants)	578½
Nurse (hospital)	328
	1,9461

Daily average number of Infants in the Reformatory during the year ending September 30th, 1886.

Day of Month.	October, 1885.	November.	December.	January, 1886.	February.	March.	April.	May.	June.	July.	August.	September.
1	4	5	5	5	4	4	4	4	4	4	5	5
2	4	5	5	5	4	4	4	4	4	4	5	5
3	4	5	5	5	4	4	4	4	4	4	5	5
4	4	5	5	5	4	4	4	5	4	4	5	5
5	4	5	5	5	4	4	4	5	4	4	5	5
6	4	5	5	5	4	4	4	5	4	4	5	5
7	4	5	5	5	4	4	4	5	4	4	5	5
8	4	5	5	5	4	4	4	5	4	4	5	5
9	4	5	5	5	4	4	4	5	4	4	5	5
10	4	5	5	4	4	4	4	5	4	4	5	5
11	4	5	5	4	4	4	4	5	4	4	5	5
12	4	5	5	4	4	4	4	5	4	5	5	5
13	4	5	5	4	4	4	4	5	4	5	5	5
14	4	5	5	4	4	4	4	5	4	5	5	5
15	4	5	5	4	4	4	4	5	4	5	5	5
16	5	5	5	4	4	4	4	4	4	5	5	5
17	5	5	5	4	4	4	4	4	4	5	5	5
18	5	5	5	4	4	4	4	4	4	5	5	5
19	5	5	5	4	4	4	4	4	4	5	5	4
20	4	5	5	4	4	4	4	4	4	5	5	4
21	5	5	5	5	4	4	4	4	4	5	5	4
22	5	5	5	5	4	4	4	4	4	5	5	4
23	5	5	5	4	4	4	4	4	4	5	5	4
24	5	5	5	4	4	4	4	4	4	5	5	3
25	5	5	5	4	4	4	4	4	4	5	5	3
26	5	5	5	4	4	4	4	4	4	5	5	3
27	5	5	5	4	4	4	4	4	4	5	5	3
28	5	5	5	4	4	4	4	4	4	5	5	3
29	5	5	5	4		4	4	4	4	5	5	3
30	5	5	5	4		4	4	4	4	5	5	3
31	5		5	4		4		4		5	5	
	140	150	155	135	112	124	120	136	120	144	155	131

Total	1,622
Average per day	4
" " month	135½

Daily average population of the Reformatory during the year ending September 30th, 1886.

Day of Month.	October, 1885.	November.	December.	January, 1886.	February.	March.	April.	May.	June.	July.	August.	September.
1	114	123	119	131	140	136	122	109	97	85	81	91
2	114	123	118	131	140	136	122	109	96	85	84	92
3	114	123	118	131	140	136	122	109	95	85	84	92
4	111	122	118	131	140	133	122	109	93	82	84	94
5	114	122	121	130	140	133	122	109	92	82	84	94
6	114	123	121	129	140	133	120	109	92	82	87	94
7	114	122	129	133	138	131	119	109	92	82	87	94
8	114	120	133	133	138	131	119	110	90	82	87	94
9	116	120	133	132	138	132	118	110	91	82	87	95
10	116	120	133	130	138	131	118	110	91	82	93	95
11	116	118	131	130	138	132	117	108	91	80	93	95
12	119	118	131	130	141	131	117	107	91	80	92	95
13	122	118	131	129	140	131	119	107	90	80	92	95
14	122	118	131	128	140	131	119	106	90	80	92	94
15	121	118	131	128	140	130	119	108	89	78	91	93
16	123	119	131	127	140	130	118	107	89	78	91	92
17	123	119	135	126	140	130	117	107	89	78	92	93
18	122	119	135	127	140	130	116	105	89	78	92	93
19	122	119	135	127	140	128	116	105	89	78	92	93
20	122	117	134	126	139	128	111	105	88	78	92	93
21	121	117	134	127	138	127	110	103	88	77	92	93
22	121	117	134	127	138	127	110	103	88	76	92	93
23	122	118	134	127	138	125	109	102	85	77	92	93
24	124	118	134	127	138	125	109	102	85	77	92	93
25	124	120	133	127	138	124	109	102	86	77	92	93
26	126	118	133	134	138	124	109	99	86	77	92	93
27	126	119	133	141	138	126	108	102	85	77	91	93
28	125	119	133	140	136	125	108	102	85	77	91	97
29	125	119	132	140	.....	125	108	102	85	77	91	96
30	125	119	132	140	.....	123	110	97	85	77	91	95
31	125	.....	132	140	.....	122	.....	97	.....	81	91	.....
	3720	3585	4032	4059	3892	4006	3463	3269	2682	2467	2784	2810

Total	40,769
Average per day	$111\frac{2}{3}\frac{5}{6}\frac{4}{5}$
" month	$3,397\frac{5}{1}\frac{}{2}$
Lowest number	76
Highest number	141

REFUGE FOR GIRLS.

Annual Statistical Report.

Number of inmates	1st October, 1885	35
" "	since received	16
" "	returned	1
		—52

Since discharged by expiration of sentence	8
" " " Lieutenant-Governor's warrant	2
Apprenticed	3
Left the Refuge	2
Sent to Insane Asylum	1
Remaining in Refuge 30th September, 1886	36
	—52

Nature of Sentence.

Direct to Refuge	13
Transferred from Refuge	3
	—16

Nationalities.

Canada	12
United States	2
Ireland	1
Wales	1
	—16

Religions.

Episcopalian	7
Methodist	6
Roman Catholic	2
Presbyterian	1
	—16

Education.

Read and write	5
Read only	2
Neither read nor write	9
	—16

Counties received from.

Bruce	2
Grey	2
Hastings	2
Middlesex	2
Northumberland	2
Brant	1
Essex	1
Ontario	1
Peterboro	1
York	1
Thunder Bay	1
	—16

Ages.

Four years	1
Seven "	3
Nine "	1
Ten "	1
Eleven years	2
Twelve "	2
Thirteen "	4
Fourteen "	1
Fifteen "	1
	—16

Offences.

Vagrancy	3
Larceny	3
Without salutary control	2
Incorrigibility	3
Without proper care	3
Prostitute	1
Selling liquor	1
	—16

Sentences.

Six months	1
One year	1
Three years	2
Four "	2
Five "	3
Indefinite period	7
	—16

DAILY POPULATION OF THE REFUGE.

Day of Month.	October.	November.	December.	January.	February.	March.	April.	May.	June.	July.	August.	September.
1	35	32	34	34	35	35	36	39	39	36	37	36
2	35	32	34	34	35	35	36	39	39	36	37	36
3	35	32	34	34	35	35	35	39	38	36	37	36
4	35	32	34	34	35	36	35	39	38	36	37	37
5	35	32	35	34	35	36	36	39	38	36	37	37
6	35	32	35	34	35	36	36	39	37	36	37	37
7	35	32	35	34	35	36	36	39	36	36	37	36
8	35	32	35	34	35	36	36	39	36	37	37	36
9	35	32	35	32	35	35	36	39	36	37	37	36
10	34	32	35	32	35	35	36	39	36	37	37	36
11	34	32	35	33	35	35	36	39	36	37	37	36
12	34	33	35	33	35	35	36	39	36	37	37	36
13	34	33	35	33	36	35	36	39	36	37	37	36
14	33	33	35	33	36	36	36	39	36	37	37	36
15	33	33	35	33	36	36	36	39	36	37	37	36
16	33	33	35	35	35	36	36	39	36	37	37	36
17	33	33	35	35	35	36	36	39	36	37	37	36
18	33	33	34	35	35	36	36	39	36	37	37	36
19	33	33	34	35	35	36	36	39	36	37	37	36
20	33	33	34	35	35	36	36	39	36	37	37	36
21	33	33	34	35	35	36	36	39	36	37	37	36
22	33	33	34	35	35	36	36	39	36	37	37	36
23	33	33	34	35	35	36	36	39	36	37	37	36
24	33	33	34	35	35	36	36	39	36	37	37	35
25	33	34	34	36	35	36	36	39	36	37	37	35
26	33	34	34	35	35	36	36	39	36	37	37	36
27	33	34	34	35	35	36	36	39	36	37	36	35
28	33	34	34	35	35	36	36	39	36	37	36	35
29	33	34	34	35	.....	36	36	39	36	37	36	35
30	33	34	34	35	.....	36	36	39	36	36	36	36
31	32	.....	34	35	.....	36	.....	39	.....	36	36	.....
Total	1044	985	1067	1061	983	1108	1078	1209	1093	1138	1142	1078

Total number of days	12,986
Average per day	35.57

REPORT OF THE SURGEON.

TORONTO, 1st October, 1886.

ROBERT CHRISTIE, ESQ.,

Inspector of Prisons and Public Charities.

SIR,—I have the honour of herewith submitting to you my Sixth Annual Report as Surgeon of the Andrew Mercer Ontario Reformatory for Females and Industrial Refuge for Girls for the year ending September 30th, 1886.

The Reformatory for Females.

I am pleased to be able to report that the health of the inmates the past year bears satisfactory comparison with that of previous years, and that, excluding those cases of illness which were undoubtedly due to predisposing or exciting causes which had operation prior to admission at the Institution, very few cases of a serious character have required attention.

The sanitary conditions of the buildings, recreation grounds, and surroundings, are excellent. The adaptation of labour to the different physical and mental capabilities of the inmates—the regular hours for refreshments, labour, recreation, instruction, sleep and rest—the plain but nourishing diet—and the habit of cleanliness enforced, all conspire to preserve a vigor of body and mind, while they greatly assist the medical treatment of those who enter suffering from one or other of the many ills to which humanity is liable.

The average daily number of inmates during the year was 111.42; while the daily average under treatment was 11.68 or about 10½ per cent. of the whole; and the daily average of those sick and wholly incapacitated for work was, in Hospital 2.54, and temporarily sick 71, making a total of 3.25, or a trifle over 2¾ per cent., on a daily average, were sick.

During the year no less than four insane women were admitted, one of which A. L———, was subsequently sent to the Toronto Lunatic Asylum, while the others more controllable were taken care of at the Reformatory.

Of the total inmates twenty-seven spent some portion of their time of sentence in the Reformatory Hospital, being two less than in the year ending with September, 1885, and eleven less than the year ending with September, 1884. Of these, ten spent from one to ten days in the Reformatory Hospital, and six spent from eleven to twenty days therein. In the remaining eleven cases the days spent by each severally, with the disease treated, were:—

39 days	Abdominal Hernia.
36 "	Chronic Rheumatism.
39 "	Asthma and Acute Bronchitis.
45 "	Neuralgia.
49 "	Acute Rheumatism.
56 "	Congestion of the Lungs.
60 "	Pleurisy.
96 "	Heart Disease, Dropsy, and Gangrene.
104 "	Renal Dropsy.
136 "	Phthisis.
169 "	Phthisis.

Only one death occurred in the Institution during the year, that of Ann McGill, an old woman and hospital patient who suffered from heart disease, dropsy, and gangrene, the last proving to be the immediate cause of death, and the other two preventing successful surgical treatment. Her death occurred August 19th, 1886. In accordance

with the usual custom an inquest was held and a verdict in accordance with the foregoing facts was rendered.

The past year there were nineteen cases of syphilis in the syphilitic ward, being six more than the previous year. Of that number nine were in at the beginning of the years 1885 and 1886, while ten additional cases were admitted during the year and four remained at the close of the year. The largest number under treatment at any one time was ten. The daily average of cases under treatment during the year in the syphilitic ward was 5.03. The nature of the disease is such that some of the inmates leave the Institution by expiration of sentence before cure is effected. Some of these in course of time during successive sentences occupy this ward more than once, and some of those who have spent but a short time in that ward the year just closed have spent a longer period before the close of the preceding year, and some of those in at the close of the past year will remain for some time the present year. Of the nineteen cases seven were in the ward from thirteen to forty-three days; six remained from fifty-one to eighty-two days; and six from 102 to 249 days. This class of cases must continue to be isolated as a measure of sanitary precaution against the spread of the disease to other inmates; still they cannot be rated as hospital cases owing to their general capability for some kind of work; while inmates of the Reformatory Hospital are sick or injured and wholly incapacitated for work.

The nursery continues to be a feature of the Institution, although of very limited proportions. The health of the babes has been good, and only trivial requirements have had existence.

Babes remaining from the preceding year	4
" admitted with their mothers	2
" born, one alive, and one still born	2
Total	8
" left Institution with their mothers	4
" dead (still born)	1–5
Remaining	3

The practice of vaccinating all new inmates who have not recently been vaccinated continues as in former years as a precautionary measure. The number vaccinated the past year was twenty-five, exclusive of officials.

Periodically, I have inspected the work-shops, corridors, cells, beds, baths, and closets, and uniformly found everything satisfactory.

I have not heard a single complaint the past year regarding the food supplied at the meals, and have at various times partaken of the meals supplied inmates, and uniformly found them of good quality and sufficient quantity.

The Reformatory Staff have been singularly free from any sickness other than that of a mild and temporary character.

The cost of medicine and medical and surgical supplies for the Institution for the year, including the Reformatory, Refuge and Staff has been very moderate, not exceeding a daily average of three mills per inmate.

The changes made by the removal of the surgery and medicines, as well as by changing the location of the nursery, has been attended by much greater convenience and facility in dealing with the sick.

I am pleased to report that my relations with the officers and staff continue pleasant. I am especially pleased to recognize the degree of efficiency attained by the chief attendant in the diversified and important duties connected with the care of medicines and their administration, and the carrying out of professional directions in the hospital, as well as with the sick in the various wards of the Reformatory and Industrial Refuge, together with the knowledge of what to do in emergencies.

Presentations for Treatment during the year ending September, 1886, excluding Hospital Cases.

DISEASE.	Number.	DISEASE.	Number.
Abrasions	6	Irritable Bladder	12
Abscess	13	Insanity	14
Acne	4	Insomnia	3
Amenorrhœa	22	Laryngitis	1
Anæmia	1	Leucorrhœa	16
Anchylosis	3	Lumbago	2
Ascaris Lumbricales	1	Lupus	3
Asthma	1	Melingerers or frivolous	89
Bilious	210	Menorrhagia	14
Boils	5	Metritis	8
Bronchitis, Acute	2	Miscarriage	1
" Chronic	2	Nausea	9
Burns	9	Neuralgia	28
Cancer	9	New inmates	123
Cancrum Oris	4	Œdema	1
Catarrh	4	Otitis	2
Cephalalgia	26	Ovaritis	17
Cholera Morbus	1	Pains (alleged and simple)	128
Chromophytosis	1	Palpitation	3
Colds	58	Paralysis Agitans	2
Congestion of Kidneys	12	Pediculi	5
" Liver	1	Phthisis	19
Conjunctivitis	12	Piles	6
Cornetis	4	Pleurisy	9
Constipation	148	Pregnancy (disorders of)	1
Contusions and wounds	9	Prolapse of Rectum	2
Cough	40	Pruritis	1
Cramps	10	Rheumatism, Acute	15
Diarrhœa	14	" Chronic	69
Dropsy	1	Rupia	1
Dungeon cases	2	Scabies	1
Dysmenorrhœa	16	Scald	1
Dyspepsia	1	Sciatica	1
Earache	12	Sore throat	65
Eczema	13	Spasm	11
Endometritis	8	Suppression of Urine	1
Epilepsy	7	Syphilis, Secondary	19
Epistaxis	1	" Tertiary	3
Erythema	13	Teeth extracted	89
Fever	1	Toothache	6
Felon	11	Tonsilitis	2
Gastralgia	2	Tonsilitis	1
Gonorrhœa	3	Testicle	1
Hemorrhoids	3	Tremors	3
Hæmorrhoids	3	Tumors	5
Hoarseness	5	Ulcers	12
Housemaid's Knee	2	Urticaria	4
Hysteria	7	Uterus (prolapse)	3
Incontinence of Urine	5	" Laceration of	1
Indigestion	68	" Ulceration of	2
Inflammation of Glands	25	Vaccinated	35
" Bones	2	Vertigo	1
" Head and Face	2	Vomiting	1
" Upper Extremities	3	Weakness or Debility	69
" Lower	7		

Monthly Record of Cases, other than Hospital Cases.

Months.	Casuals or Ordinary Cases Presenting.				Syphilitic Ward.	
	Total Cases Seen.	Daily Average of Cases.	Total Cases Sick.	Daily Average Sick.	Total Inmates.	Daily Average.
October, 1885	138	4.45	17	.54	10	9.58
November, "	141	4.70	18	.60	11	7.86
December, "	161	5.19	24	.77	7	6.25
January, 1886	174	5.61	36	1.19	6	5.32
February, "	149	5.32	31	1.10	5	5.00
March, "	143	4.61	12	.38	7	5.25
April, "	154	5.13	29	.96	4	3.60
May, "	117	3.77	19	.61	3	3.00
June, "	156	5.20	35	1.16	3	1.53
July, "	97	3.12	5	.16	0	0.00
August, "	128	4.12	22	.70	4	2.41
September, "	123	4.10	11	.36	5	4.63

Cases treated in the Reformatory Hospital.

Disease.	Number.	Disease.	Number.
Abdominal Hernia	1	Heart Disease	1
Asthma	1	Hysteria	1
Bronchitis	1	Inflammation of Arm	1
Childbirth	2	" Leg	1
Congestion of Kidneys	2	Miscarriage	1
" Lungs	2	Neuralgia	2
Debility	1	Phthisis	2
Dropsy (Renal)	1	Pleurisy	1
Enteritis	1	Rheumatism (Acute)	3
Erysipelas	1	" (Chronic)	1
Gangrene	1	Wounds	2
Hæmoptysis	1		

Monthly Record of Hospital Cases.

Months.	Total Inmates.	Total Days.	Average Inmates per Day.
October 1885	9	127	4.09
November ... "	8	96	3.20
December .... "	7	67	2.16
January 1886	6	68	2.19
February ... "	5	90	3.21
March ..... "	5	55	1.77
April ..... "	3	15	.50
May ..... "	3	44	1.41
June ..... "	3	67	2.23
July ..... "	5	100	3.22
August ..... "	4	111	3.58
September ... "	3	90	3.00

Industrial Refuge for Girls.

It is gratifying to be able for the sixth time to report favourably upon the health of the girls in the Refuge. Six years have rolled by since this Department was opened, and during all that time not a single death has occurred. No epidemic has visited the girls, and with very few exceptions they have enjoyed the best of health. At the beginning of the year there were thirty-five inmates, and during the year sixteen new ones were received, making a total of fifty-one. Of that total, thirty girls were treated for some ailment during the year; but only in one case was there anything of a serious nature. The exception was a case of insanity of a dangerous type, developing in A. C———, who spent three years five months and twenty-one days between her admission and final committment to a lunatic asylum. In this case hereditary predisposition, associated with an uncontrolled exciting cause, gave little hope for recovery. Among the remaining cases no girl was confined to bed for a longer period than two or three days. At the close of the year thirty-six bright, healthy and promising girls remained. This Institution is a source of pride to all connected therewith, and merits a greater share of the attention of Judges and Police Magistrates throughout the Province.

Following are the diseases or ailments treated during the year, with the number of girls afflicted with each :—

Disease.	Number.	Disease.	Number.
Abscess	2	Insanity	1
Abrasion	1	Measles	1
Amenorrhœa	1	Nausea	1
Ascaridi Lumbricales	1	New Inmates	16
Bilious	1	Teeth Extracted	11
Cold	7	Toothache	1
Constipation	1	Tonsilitis	1
Cough	1	Vaccinated	5
Housemaid's Knee	1	Weakness	1

I have the honour to be, Sir,
Your obedient servant,

JOHN S. KING, M.D.,
Surgeon.

Andrew Mercer Reformatory Sunday School.

Sixth Annual Report.

Owing to the nature of the work, and the circumstances under which it is prosecuted, the reports of the Sunday School in this Institution vary but little from year to year.

The average attendance of inmates was much the same as in past years, increasing noticeably in the winter months, and diminishing in summer. The conduct of the pupils, those of the Girls' Industrial Refuge, as well as of the Reformatory, was most commendable.

The word of God is handled with reverence, and the instructions of teachers, as well as the addresses from the desk, were listened to with the deepest attention.

The teachers, for the most part, have attended with regularity, and though frequently most efficient workers, were compelled, through circumstances, to drop out of the ranks, their places were speedily filled by others as earnest and faithful. The teachers are deeply interested in their work, and the attachment between them and their pupils is very apparent.

The evangelistic services held in connection with the school have been times of blessing and refreshment, not only to inmates but to the workers. The Saturday afternoon Bible class was held regularly throughout the year. In this class individuals are dealt with personally, and frequently the inmates take part intelligently in the proceedings.

Through the "Canadian Letter Mission" letters were received at Christmas and Easter. These were much appreciated, and in more than one instance were a means of blessing to the recipient.

The yearly contribution of Bibles from the Upper Canada Bible Society was eagerly looked for, and gladly received.

Cast-off clothing was provided in every instance where the teachers were aware of its need. Twenty-two inmates, including one from the Refuge, were assisted by the teachers at time of discharge. Several of these the workers met on morning of discharge, the others came direct to the Assistant Superintendent, and were recommended to the Haven or placed in service.

Our hearts have been cheered from time to time by one and another giving evidence, not only of moral improvement, but that there is a work of grace in the heart. It is not to be expected that these evidences will be as marked and clear as in cases where there is much greater light and knowledge, and the associations and surroundings are more helpful, but they are sufficiently striking to afford much encouragement to the workers.

We avail ourselves of this opportunity to thank Mrs. O'Reilly and the other officers and attendants for their continued and ever increasing kindness to the workers, and for the assistance thus afforded them in the prosecution of the work.

Above all, we praise and thank God for the opportunity—nay more—the privilege of carrying the Gospel of our Lord and Saviour Jesus Christ to our forlorn and imprisoned sisters, and for the success which has crowned the giving of the message.

W. H. HOWLAND, Superintendent.

L. J. HARVIE, Assistant Superintendent.

E. G. SAMS, Secretary.

REFORMATORY FOR BOYS.

Perhaps the most noticeable feature in the history of the Reformatory during the year is the falling off in population, which on the 30th September numbered but 205, accounted for, of course, by the reduced committals to the Reformatory during 1885 and 1886. Notwithstanding the increase in the population of the Province during the past five years, there has been in that period a considerable falling off in the commitment of boys; thus in the five years ending 30th September, 1886, the number of boys received into the Reformatory was 338, while in the preceding five years it was 377, a difference of thirty-nine. It is to be hoped that this state of things is the result of the increased efforts made in the past few years to reclaim the idle and vicious of the youthful population of the country, and that it will be an encouragement to increased efforts in the future. Not only, too, was there a reduction in the number of boys sent to the Reformatory, but there was a very considerable falling off in the number committed to the gaols. I trust that this is really an indication of a decrease in crime and vice, but I fear to speak very hopefully on the subject, for it is impossible to go into the streets of our larger cities and towns and not see many boys, who would be greatly benefited by a stay in the Reformatory. I fear, too, that as as regards the decrease in the commitments to the Reformatory, it may be to some extent the result of leniency through which a boy is sentenced to a short term in the common gaol rather than to the Reformatory. It would be far better to let the boy go free, for in the majority of the gaols he cannot be separated from the adult prisoners, and he is in idleness, and at the termination of his sentence is released possibly worse than when committed, and, if so, ripe for some offence of a more serious character than that for which he has just been punished. After probably one or two more short terms in the gaol, he is eventually sent to the Reformatory, but the boy reaches it when he is hardened by constant contact with criminals, and so there is much more work for the Reformatory officers to do, as he is not now easily impressioned for good.

I believe that before very long an Industrial School, established under the Act of 1884, and situated within a few miles of Toronto, will be opened. To a school of this kind, children coming within any of the following classes can be sent by a County Judge, or Police Magistrate, until they attain the age of sixteen years, viz :—

1. Any child who is found begging or receiving alms, or being in any street, or public place for the purpose of begging or receiving alms.

2. Who is found wandering, and not having any home or settled place of abode, or proper guardianship, or not having any lawful occupation or business, or visible means of subsistence.

3. Who is found destitute, either being an orphan, or having a surviving parent who is undergoing penal servitude or imprisonment.

4. Whose parent, step-parent, or guardian represents to the Judge or Magistrate that he is unable to control the child, and that he desires the child to be sent to an Industrial School under this Act.

5. Who, by reason of the neglect, drunkenness, or other vices of the parents, is suffered to be growing up without salutary parental control and education, or in circumstances exposing him to lead an idle and dissolute life.

6. Who has been found guilty of petty crime, and who, in the opinion of the Judge or Magistrate before whom he has been convicted, should be sent to an Industrial School instead of to a gaol or reformatory.

Schools of the kind indicated by the Act in question, will no doubt be established in other places, if it be found that the one referred to is successful. They will afford places to which can be sent youths, whom the sentencing Magistrate may not desire to commit to the Reformatory, but whom it is desirable to withdraw from objectionable surroundings.

The actual operations of the Reformatory during the past year, as well as those in the previous one, are shown in the following summary, and in my minutes of inspection, and in the reports of the Reformatory Officers, reference is made to all matters of interest which occurred during the year:—

	1885.		1886.	
Number in residence at beginning of year (1st Oct.)	242		220	
Admitted during the year	51		64	
Returned after escaping	2		1	
Total number in residence	295		285	
Discharged according to sentence	59		57	
Transferred to the Central Prison	..		2	
Reprieved	14		21	
Died	...		...	
Escaped	2			
		75		80
In residence at close of year (30th Sept.)	220		205	

Details of the cost of maintaining the Reformatory during the years 1885 and 1886 will be found in the table given below :—

SERVICE.	Year ending 30th Sept., 1885.		Year ending 30th Sept., 1886.	
	Total Expenditure.	Annual cost per inmate.	Total Expenditure.	Annual cost per inmate.
	$ c.	$ c.	$ c.	$ c.
Salaries and wages	15804 18	66 68	15946 68	72 48
Rations	5332 25	22 50	4598 10	20 90
Bedding and clothing	4848 70	20 46	5475 92	24 89
Fuel, light and cleaning	5446 31	22 98	5179 80	23 54
Furniture and furnishings	988 70	4 17	790 64	3 60
Farm expenditure	2655 45	11 21	2286 07	10 40
Ordinary repairs	1309 95	5 53	1328 62	6 04
Stationery, postage, telegrams and advertising	709 84	3 00	563 13	2 56
Workshop, tools and fixtures	681 83	2 88	397 68	1 81
Hospital expenses	54 37	0 23	86 96	0 39
Chapel, school and library expenses	441 62	1 86	470 74	2 14
Officer's travelling expenses	36 45	0 15	43 14	0 19
Recovering escaped boys	249 24	1 05	721 29	3 28
Rent of cottages for guards	481 36	2 03	505 74	2 30
Freight	299 50	1 26	156 51	0 71
Sundries	753 73	3 18	713 02	3 24
Totals	40093 48	169 17	39264 04	178 47

INSPECTIONS.

Copies of the Minutes made by me of my inspections of the Reformatory are appended :—

"I made an inspection of the Reformatory for Boys, on the 25th June. My visit was made more particularly with the view of arranging for the commencement of the new building to be erected as a residence for the Superintendent of the Institution. I, however, made a general inspection, and saw all the boys at their various employments. Although the majority of the inmates appeared to be in excellent health and to be receiving the usual care and attention, yet a number of them were complaining, and I found six of them ill with pneumonia; two or three of them seriously so. I was gratified to learn, however, that the indications were that they would all be in a convalescent state in the course of a few days. No very satisfactory reason could be assigned for so large a number of the lads being attacked almost simultaneously with the same ailment; but

the assumption was that they had become heated by taking vigorous exercise on the play-ground, and had not used sufficient precaution afterward.

"Owing largely to the want of assistance, I found that the new laundry-rooms were not yet ready for occupation. In view of the present health of the boys, it is imperative that the outside building should be used for the laundry work, and the Superintendent will therefore endeavour to get some competent engineer to complete the work as rapidly as possible, and effect the removal of the laundry work from the main building.

"The arrangements formerly sanctioned for the commencement of the new residence for the Superintendent have been promptly put under way, and the foundation walls were found to be in a forward state, notwithstanding that considerable difficulty had been experienced in getting a good foundation, in consequence of quicksand, which was not discovered until the work of excavating had been completed. This difficulty, together with the weather being unusually wet, caused some delay in the operation, and the work for the time being has been suspended. Now, however, everything is in good shape to proceed with the work.

"I found the Institution to be well kept, and in a good state of preservation, with the exception of the floor of the dining-hall which has to be renewed, and for which an appropriation has been made. The material is provided and the work will be proceeded with as soon as the Institution carpenter can attend to it. I found the stores department in good condition, clean and orderly.

"An examination of the records shewed them to be well kept."

"I again visited the Reformatory for Boys, Penetanguishene, on the 10th July, more especially with a view to noting the progress being made in the work of construction going on.

"The difficulty referred to in my last minutes of laying the foundation walls in consequence of an underlying bed of quicksand has been overcome; but the extra expenditure in material and labour which this has entailed, will cause the original estimate for the building to be considerably exceeded. The site, however, could not well be abandoned when so much work had been done, and other difficulties might have been met with if another site had been chosen. It is evident, therefore, that the best course has been pursued in successfully combatting the difficulties met with in the first instance.

"I found the Institution in a satisfactory condition, and the health of the inmates much improved. Sixteen cases of pneumonia had been recorded since its first outbreak, but all of them were now convalescent, only one lad remaining in bed, and it was thought that he would be about in the course of a day or two. The usual routine work of the Institution was being regularly proceeded with in a satisfactory manner."

Examination of Schools.

The Reformatory Schools were examined by Mr J. C. Morgan, the Public School Inspector of the County. A copy of his report is appended —

I have the honour to present to you my Third Annual Report on the Schools of the Reformatory, and to suggest such changes and modifications as seem to me to be best calculated to increase their efficiency.

Attendance.

In Mr. Mahony's room I found thirty-four in the morning and the same number in the afternoon—in all sixty-eight; sub-divided into six classes, from Junior 1st to 5th Class.

In Mr. Murphy's room there were in the morning nineteen in Class IV., and in the afternoon thirty-two in Class III.—making a total of fifty-one.

In Mr. Ferguson's room the morning attendance was thirty-three—all being in Book II., though in two divisions, and the afternoon shewed thirty-seven, divided as follows: Part I., eight; Part II., twelve; Book II., seventeen.

Classification.

The number on the roll in each room was, therefore, Mr. Murphy, fifty-five; Mr. Ferguson, seventy-nine; Mr. Mahony, seventy-six. It will thus be seen that an improvement can be made by putting part of Mr. Ferguson's divison, say Senior II. Class, into Mr. Murphy's charge. This would make the numbers about even in these two rooms, *i.e.*, about sixty-seven in each, with about twelve more under Mr. Mahony's charge. Even under these circumstances the teacher of the Roman Catholic School would be placed at a very great disadvantage, inasmuch as he would be required to teach as many classes as the two other teachers, and yet he would have an average attendance somewhat larger than that of either of them. Still this will be the best arrangement that can be made until a more intimate knowledge of the circumstances and needs of the Institution, a broader and more liberal view of the situation, breaks down the wall between the two schools, places all the pupils under the same secular system, and gives to each lad the vastly increased advantages which a proper grading of the schools would ensure; advantages, too, which would be mainly enjoyed by the minority.

Condition.

I am pleased to be able to report an improvement throughout, slight indeed, in Mr. Ferguson's room, but quite perceptible in the two others. The most apparent progress has been made in the study of English, and in practical business Arithmetic, but even in these two subjects much remains to be done, for the written expression of thought, even in so simple a test as a business letter, is still exceedingly crude, and although a supposititious account was fairly made out and rendered by most IV. Class pupils, a discounted note in payment was, except in two instances, totally incorrect even in form. The writing throughout the Institution is generally speaking very creditable, and the reading in the senior classes fair. The methods, however, in the lowest classes are not calculated to produce the best results. Spelling has not shown very much change for the better, for although Classes III. and IV. are fairly satisfactory, the spelling below them was really bad.

Rooms.

With respect to the arrangement of the rooms, it is to be regretted that Mr. Mahony and Mr. Ferguson have to teach in rooms so small and overcrowded that it is quite impossible to bring up classes properly to recitation, difficult to have good order and discipline, and almost hopeless to attempt to have the air in a condition at all pure. Until other and better arrangements can be made, I would suggest the division of Mr. Murphy's room into two, putting Mr. Ferguson's classes into one part. Not only would this improve Mr. Ferguson's condition without injuring Mr. Murphy's, but the latter would more easily exercise the constant supervision over his assistant which his authority and responsibility as Senior Protestant teacher render necessary.

Subjects.

A most important question, and one which should at once be considered and decided is: What subjects should be taught in these schools? To arrive at a proper conclusion,

we must recollect that the circumstances are radically different from those which surround ordinary schools.

In my opinion the teaching should have for its aim the giving to the lad the best and readiest opportunities possible of beginning a useful and honourable life immediately on leaving the Reformatory, and it should therefore be thoroughly practical

His first step will obviously be try to obtain some situation, and to do this he must make application either personally or by letter. Hence the absolute necessity of cultivating a correct and pleasant speech, and the faculty of writing a good, plain, business letter. But as the most beautifully expressed letter would be useless if illegible the writing of a plain round unflourished hand should be insisted on. Having once obtained a situation it is probable that our lad will find these two accomplishments called into use pretty constantly, and in addition he will almost surely need, at least will find exceedingly useful, a knowledge of practical Arithmetic ; *i.e.*, quick and correct work in the four elementary rules, (mentally as far as possible), a thorough knowledge of the compound rules, some acquaintence with multiples, measures, and very easy fractions, the faculty of reasoning in Arithmetical form, interest, etc., and simple book keeping by single entry, with a thorough knowledge of all business forms. Then, too, he should be taught to read so *easily* and *readily* that it is pleasanter for him to read than to loaf, and so *agreeably* that he can afford enjoyment to others. In addition to these subjects, which after all are merely the three R's modified to suit the necessities of this particular Institution and century, I would plead earnestly for a very fair knowledge of Mechanical Drawing and Vocal Music—the former because it is of incalculable advantage to every mechanic and artisan, and is useful to every man, and the latter because it would give our lad a connection with church choirs and other associations, which could not but benefit him very greatly, and because it would inevitably be the means of introducing him to a class of people whom he would not otherwise meet, and from whom he would certainly derive good.

I am fully aware of the difficulty of having these two subjects taught *now*, but there have been several changes in the staff of teachers since I first inspected the school, and I would suggest that the capacity to teach one or other branch be a *sine qua non* in the engagement of future masters. Many men could be obtained who could handle one or other subject, (perhaps both) and at the same time teach thoroughly everything else required of him. If the will to make this improvement exists, the way lies open. I would certainly teach nothing else except elementary Geography and the topography of Canada, until the subjects already named were thoroughly mastered.

Apparatus.

I notice a few things which are needed in the schools : Three crayon-holders, three crayon-compasses, a box of colored crayons for map and mechanical drawing, two maps of the World and of the Dominion, two large numeral frames, and two large Globes.

I also recommend again, and most earnestly the making a grant for the purposes mentioned in my last report. The expense cannot be an objection, because where so heavy an expenditure is already necessary, the sum of $25 or $50 would not be felt, and would return itself ten-fold in results.

I have asked nothing, I have recommended nothing, the advisability of which I have not well and carefully weighed ; the result of carrying out the suggestions will most surely be to benefit an Institution, in which I cannot but take the deepest interest, whether from the constant and thoughtful kindness always experienced at the hands of the Warden, the Deputy and the other Officials, or from the compelling influences of the boys themselves, whose future for weal or woe in this world, (and even to some extent in the next), will be largely determined by the Educational work done in this Institution.

The reports of the following officers are annexed :—

The Superintendent (with statistical tables), the Surgeon, the Protestant Chaplain, the Roman Catholic Chaplain, the Protestant School Master, and the Roman Catholic School Master :—

The Superintendent's Report.

Penetanguishene, October 27th, 1886.

Sir,—I have the honour, herewith, to submit the Twenty-seventh Annual Report of the Ontario Reformatory for Boys for the year ending September 30th, 1886.

The statistical tables for the the year, below appended, evidence a decided decrease in our population when compared with those furnished, year by year, since 1878, when 196 represented the number then in residence. From that year until 1882, inclusive, a marked increase is noticeable, the inmates at latter date numbering 263. Gradually from that time to the present a falling off has taken place, the record this year shewing only 205 inmates in charge on September 30th, the end of the official year. During those four years, that is, from 1882 to 1886 it may reasonably be inferred that the population of the Provence has not diminished, yet the commitments to this Institution are over 20 per cent. less than in the four years preceding; for example—from 1878 to 1882 we received 317 boys—from 1882 to 1886 only 254 were sent here. From this data it may be argued that juvenile crime is evidently decreasing; that the untiring efforts for the reclamation of the youth of the country from their evil ways, put forth by the churches of the land, and by other organizations working in harmony with these, have not been fruitless of results; and that the time may not be far distant when such an Institution as this will no longer be necessary. When that day comes, and we hope it will be in our day, although "our occupation would be gone," it will be hailed by us with exceeding gladness and thankfulness of heart.

We will now proceed to review the transactions of the year just ended, and see if the results are such as to justify the speculations indulged in in the latter part of the preceding paragraph; for it is but reasonable to infer that if a fair measure of success has not been achieved in this field of labour, where the moral forces can be concentrated, and where the enemy to be combatted is, in compact body, daily and hourly exposed to the influences of these forces, then the possibilities foreshadowed above are not so nearly within that easy reach so eagerly to be desired.

To estimate, sum up, and state accurately the degree of advancement, in the moral order, attained during the year is by no means easy, if at all possible, with a population such as ours where hardly a week passes without some change in its number and character. Newcomers filling up the gap made by those discharged through expiration of sentence, or by remission of part thereof for good conduct. The *entrants* fresh from the Provincial gaols or the Central Prison, as the case may be, bringing in with them from these centres of depravity, also from the cities and towns which for the time being have been purged of their presence, all the latest devices and novelties known to criminals of the juvenile class. The advent of these naturally upset all calculations previously made, and forces us to blot out our summing up of averages and begin anew, and then undertake the solution of the problem as to our position in respect to moral advancement at that particular juncture when ten or more boys have been discharged, some of them considerably improved, the balance thoroughly reformed, and their places have been taken by the newcomers above described.

With the foregoing explanation, the difficulty in arriving at exact results, when the changes in population are so frequent, can be better understood. Still when we generalize, a more satisfactory conclusion can be reached, and this can be best conveyed by our outlining the present conditions of affairs as they now present themselves within the Institution.

1st. Contentment is the prevailing feeling: Therefore very little display of unrest, this being evidenced by the few attempts at escaping, many less ventures of that character being recorded for this year as compared with the years preceding.

2nd. Amenability obtains in greater degree: This is shown by the reduced number of punishments, and by the trivial nature of the officers, as shewn in the punishment returns for the year.

3rd. Progress: The Annual Reports of the Chaplains, the School Inspector, and the school teachers will bear me out in stating that the moral and mental advancement of the boys is beyond that of any year in the last seven, although in these years we had reason to be fairly satisfied that the efforts put forth in their behalf had not been profitless.

Hitherto, with one exception, I have, in my Annual Reports, designedly refrained from making direct or extended reference to my staff as a whole, or to the individual members thereof, whether complimentary or the reverse. With respect to the latter, matters would require to be in a sorry state before such a course would be considered wise or even justifiable. That I have, until now, abstained from general commendation, can be readily understood by the more thoughtful of those interested, it being patent to them that some of their fellow-workers, through being new to the work, could not as yet merit encomium. To be compelled to make invidious distinctions is not at any time pleasant, therefore one is desirous to avoid the occasion which would oblige these to be drawn. But happily for me the time has now arrived when I feel justified in overcoming the reserve which, in the above direction, has, until now, governed me when engaged in reviewing the work for the year.

Many of the men who were here when I was first placed in charge are here still Since my appointment over seven years have elapsed, during which period many changes through deaths, resignations and dismissals, have taken place. Men new to the duty and its responsibilities were, from time to time, chosen to fill up the depleted ranks, many of whom failed in reaching the requisite standard of efficiency. For the past three years very few changes in the staff have been required to be made, hence most if not all those now on the roll have passed the graduating points; and I am now, happily for the Institution, myself and all concerned, able to state unreservedly that my assistants are, 1st, keenly alive to the importance of their task; 2nd, intelligent in its performance, and, 3rd, harmoniously and loyally fulfilling the trust confided to them, and although the usual variety of creeds and nationalities are in just proportion represented, yet jealousies, bickerings and their kindred evils, have no existence in the staff as at present organized.

The rank and file being in this very satisfactory condition, it becomes a question as to whom this very happy state of affairs may, in large measure, be ascribed. Simply to my second in command, the Deputy Superintendent, Mr. Steadman, who in virtue of being my executive officer, necessarily is in more immediate and continuous contact with the men than I could well be; and who, by setting the example of perfect sobriety unswerving zeal, unwearied assiduity and better still, that of minding his own business solely, has, in no inconsiderable degree, contributed towards producing it. Last winter during intervals of leisure, the task of painting and otherwise ornamenting the main hall of the building he voluntarily imposed on himself—how well he succeeded the expressions of delight and astonishment from visitors go far to prove. Besides these embellishments a number of appropriate mottoes were, by him, placed around the arches and over the doors of the principal offices. Above the door of the office occupied by the Deputy Superintendent, chosen by himself and put there by his own hands is the legend, "A man is valued as he makes himself valuable." The lesson which this inculcates he daily lays to heart, and the sentiment which it embodies governs his actions throughout.

The material progress made during the year is considerably beyond the average. This is largely due to a condition of affairs already noted, that is, to the very few attempts at escaping, for when these occur, serious interruptions to work is the result.

The roadways within the precincts of the Reformatory have, at numerous points, been much improved, the road bed in many locations has been raised and properly graded, the crown of the road perfected, and the ditches cleaned out and deepened. Last spring, in consequence of sudden and prolonged thaws, we had more than the usual number of washouts: the damage done by these to the roadways, culverts, etc., have been thoroughly repaired, and in many places, through diverting the channels and watercourses, a remedy has been provided against future invasions of a like character. Connected with the

erection of the new residence for the Superintendent, a large amount of work during the summer devolved on the boys—the excavations for foundation, attendance on the masons, bricklayers, etc., hauling of material, digging of drains, cisterns, and all such work, being performed by them.

The new laundry has, since midsummer, been in successful operation. Hitherto the due performance of laundry work was beset with many difficulties, and when it is known that an average of 2,000 pieces per week, all large, have to be cleansed, dried, put through the mangle and then folded, the necessity for a suitable place with proper facilities, will be better understood.

Farming and gardening operations promise to be fairly successful, considering that a backward spring and a cool summer prevailed in this locality.

Continued improvement in the character of the horned cattle it is my pleasure to report, also that the same good management which ensures for the boys a full supply of milk at all seasons, winter included, is still apparent.

The product of the piggeries, this year, has been more than satisfactory. The stock of pigs now on hand are of pure breed—all the *runts* being weeded out. The expectations, in this department of stock-raising, have been substantially realized.

I have the honour to be, Sir,
Your obedient servant,

THOMAS McCROSSON.
Superintendent.

R. CHRISTIE, ESQ.,
Inspector of Prisons, etc.
TORONTO.

STATISTICAL TABLES.

Showing the operations of the Reformatory for the year ending the 30th September, 1886.

In residence 1st Oct., 1885	220
Admitted during the year	64
Returned after escaping	1
Total number during the year	285
Discharged according to sentence	57
Sentence remitted, in part, for good conduct	21
Transferred to the Central Prison	2
Escaped	0
	80
Remaining residence 30th Sept., 1886	205

AGES WHEN COMMITTED.

2 at 8	7 at 12	15 at 15
2 at 10	9 at 13	6 at 16
5 at 11	14 at 14	4 at 17
Total		64

PERIODS OF SENTENCE.

For an indefinite period not to exceed	5 years		3
" 3 months "	"	5 "	1
" 4 " "	"	5 "	1
" 1 year "	"	2 "	1
" 1 " "	"	4 "	2
" 2 years "	"	5 "	4
" 3 " "	"	5 "	2
" 1 year			2
" 2 years			4
" 3 "			16
" 4 "			19
" 5 "			9
Total			64

NATIONALITIES of the Boys committed during the year, and of those committed since the establishment of the Reformatory.

	Commitments of the year.	Total commitments.
Canadian	49	1189
English	8	149
Irish	4	58
Scotch	1	28
United States	2	129
Other Countries	....	18
Total	64	1565

RELIGIOUS Denominations of Boys committed during the year, and of the boys remaining in the Institution on the 30th September, also of those committed since the establishment of the Reformatory.

	Commitments of the year.	In residence 30th September	Total commitments.
English Church	15	64	510
Roman Catholic	17	72	529
Presbyterian	12	23	150
Methodist	14	38	283
Baptist	6	8	73
Other denominations	....	....	20
Total	64	205	1565

Crimes for which the 64 boys were convicted and sentenced to the Reformatory :

Larceny	41
Incorrigible and Vicious conduct	3
Larceny and Shopbreaking	3
Setting fire to a Railway Car	1
Assault	1
Vagrancy	5
Housebreaking and Larceny	2
Housebreaking	7
Arson	1
Total	64

Counties of Province from which the 64 commitments were made during the year :

Brant	2	Ontario	3
Bruce	5	Oxford	3
Frontenac	5	Perth	2
Halton	1	Simcoe	3
Lambton	4	Wentworth	12
Lanark	1	York	8
Lincoln	5	Total	64
Middlesex	5		
Norfolk	5		

Counties of Province from which the 205 boys in residence on 30th September originally came :

Algoma	1	Middlesex	21
Brant	7	Norfolk	7
Bruce	7	Ontario	9
Carleton	3	Oxford	9
Elgin	6	Perth	1
Essex	1	Peterboro'	1
Frontenac	16	Prescott and Russell	2
Grey	3	Simcoe	7
Halton	1	Stormont, Dundas and Glengary	4
Hastings	2	Waterloo	1
Huron	3	Welland	2
Kent	8	Wellington	3
Lambton	10	Wentworth	29
Leeds and Grenville	3	York	28
Lanark	2	Total	205
Lincoln	8		

NUMBER of Commitments since Confederation.

COMMITMENTS.	Year.	Number.	Number at close of same year.
Committed in	1867	55	170
"	1868	59	173
"	1869	47	170
"	1870	41	163
"	1871	48	155
"	1872	48	158
"	1873	31	130
"	1874	58	139
"	1875	71	173
"	1876	47	183
"	1877	75	195
"	1878	69	196
"	1879	57	206
"	1880	80	216
"	1881	96	250
"	1882	84	263
"	1883	58	245
"	1884	81	242
"	1885	51	220
"	1886	64	205

PRODUCE of the Farm and Garden from the 1st October, 1885, to 30th September, 1886.

FARM.

Upland Hay	9 tons	@	$10 00	$ 90 00	
Potatoes	950 bush	@	0 40	380 00	
Milk	19256 qts.	@	0 03	577 68	
Pork	9518 lbs	@	5 50	523 49	
Pigs	78			308 00	
Calves	5			48 00	
					$1927 17

GARDEN.

Vegetables	1109 79

REVENUE.

Farm and Garden	Exchange Account	302 97
		$3339 93

STATEMENT exhibiting the labour in the various Shops for the year ending 30th Sept., 1886.

CARPENTER SHOP.

	Days.	
To work at the Superintendent's house	25	
" " Deputy "	12	
" " Farmer's "	101½	
" " Protestant Chaplain's house	252	
" " Rom. Cath. " "	4	
" " Institution	2078	
" " Guards' houses	88	
" " New house	742	
Total number of days @ 40c	3818½	$1527 40
Total cash as per workshop account		3 55
		$1530 95

Shoe Shop.

To 649 pairs of laced boots	@	50c.	making	$324	50
" 1209 " "			repaired @ 30c	362	70
" 1900 days work outside	@	25c		475	00
" Cash as per workshop acccount				1	50
				$1163	70

Tailor Shop.

To making	358	coats for inmates	@	$1	00	$358	00
"	701	pants "	@		50	350	50
"	418	caps "	@		20	83	60
"	50	prs. slippers "	@		10	5	00
"	478	shirts "	@		15	71	70
"	158	drawers "	@		15	23	70
"	193	undershirts "	@		15	28	95
"	15	aprons "	@		05		75
"	183	mattresses (dormitories)	@		25	45	75
"	111	sheets "	@		10	11	10
"	118	pillow cases "	@		05	5	90
"	33	towels "	@		01		33
"	73	suits for discharged boys	@	4	00	292	00
"	27	overcoats " "	@	2	50	67	50
"	22	suits for officers	@	5	00	110	00
"	16	prs. pants "	@	1	00	16	00
"	21	linen coats "	@		75	15	75
"	9	pr. drill pants "	@		50	4	50
"	2	" coats "	@	1	00	2	00
"	20	caps "	@		25	5	00
"	3	overcoats "	@	3	00	9	00
To Repairing	75	prs. drawers for inmates	@		05	3	75
"	123	shirts "	@		05	6	15
"	185	coats "	@		10	18	50
"	150	pants "	@		10	15	00
"	19	overcoats for officers	@		25	4	75
"	22	coats "	@		25	5	50
"	34	pants "	@		10	3	40
"	15	vests "	@		10	1	50
To 221 days work outside for inmates			@		25	55	25
" Cash as per workshop account						9	00
						$1629	83

Recapitulation.

Carpenter shop	$1530 95
Shoe "	1163 70
Tailor "	1629 83
	$4324 48

A STATEMENT exhibiting the number of days' labour expended upon permanent improvements and structural alterations from June 9th to 30th September, 1886.

HOW EMPLOYED.	Number of Boys.	Length of Day.	Number of Days.	Value per Day.	Total Value of Boys' Labour.
		Hours.		cts.	$ c.
On drains	37	8	40½	30	12 15
Excavating for foundation of the Superintendent's house	26	8	89½	30	26 93
Repairs to employees' houses	11	8	54	30	16 20
Laying water pipes	44	8	44	30	13 20
Working on Superintendent's house	17	10	439	35	153 65
Repairing roads	18	8	144	30	43 20
Cleaning ditches	6	8	6	30	1 80
Excavating for drains from the Superintendent's house	18	8	72	30	21 60
Total					288 73

SURGEON'S REPORT.

ONTARIO REFORMATORY FOR BOYS,

PENETANGUISHENE, Oct. 1, 1886.

SIR,—I have the honour to submit the Medical Report of the Ontario Reformatory for boys for the year ending September 30th, 1886.

Our boys enjoyed as good health as could have been expected during the past year, and with the exception of the months of June and July, we had no sickness of a very severe nature.

From the beginning of June to August we had some twenty cases of pneumonia, most of them of a severe type, and although contagious pneumonia is not an accepted term with the medical fraternity, I am fully satisfied that in this particular epidemic the disease was contagious.

Although some of the patients were inmates of the hospital for a long time, they all eventually recovered, and it is with feelings of pleasure and thankfulness that I record in my report the passage of still another official year without a death in this Institution.

We regret having been compelled to deprive the boys of their reading room during this epidemic, and, in fact, during every case of serious illness which we convert into a hospital, as the size and situation of the room we ordinarily use as hospital, do not give the patients the same advantages obtained in the higher, dryer, and better ventilated reading-room.

From its isolated position in the upper part of the building it makes a very convenient hospital, and the complete recovery of all the patients during the pneumonia epidemic was, no doubt, largely attributed to our hospital accommodation.

As improvement is the order of the day, we trust that a suitable hospital will soon be provided without depriving the boys of the advantages of their reading room.

We had about the ordinary amount of sickness and accidents that the same number of boys would likely be subject to, but, with the exception of the epidemic of pneumonia, nothing occurred of sufficient gravity to require special notice.

The boys are well fed, well clothed, and have sufficient work to keep their blood in circulation and give them a good appetite.

The buildings are kept clean, properly heated and ventilated, and it must be a source of great satisfaction to parents having children in this Institution to know that, in addition to obtaining a fair education and useful trade, their boys are cared for in a manner best adapted to secure good health, and that when they leave the Reformatory they will carry with them habits of industry and a well-nourished body, both of which are so necessary to make labour profitable.

The boys are beginning to appreciate the many advantages they enjoy, and the cheerful countenance, the school-boy appetite at meals, and the hearty laugh on the play-ground, all indicate how surely this Institution is losing its prison aspect and assuming in reality, what it is in name, the Reformatory School for Boys.

I have the honour to be, sir,
Your obedient servant,

P. H. SPOHN,
Surgeon.

R. CHRISTIE, ESQ.,
Inspector, &c.,
Toronto.

PROTESTANT CHAPLAIN'S REPORT.

REFORMATORY FOR BOYS,

PENETANGUISHENE, Oct. 4th, 1886.

R. CHRISTIE, ESQ.,
Inspector of Prisons, etc.

SIR,—I have the honour to submit my report as Protestant Chaplain for the nine months ending 30th September, 1886.

In taking charge of the religious training of the Protestant lads in the Reformatory, I fully appreciated the peculiar difficulty in which I was placed, owing to the variety of religious bodies grouped together under my instruction, and I have endeavoured to realize my position as the representative of all denominations, so as to do justice to all. We have two services on Sunday, and morning and evening services throughout the week. One of these services is from the Church of England Prayer Book, all the others being conducted on the lines of the other denominations, *i.e. Extempore.*

In the Sunday School the work has gone on steadily and satisfactorily, and although the teaching has, of necessity, to be very general, owing to the impossibility of obtaining teachers, and thus classifying according to age and ability, yet there have not been wanting many evidences of the work that is accomplished.

In the Library Department there has been a decided improvement, the number of books applied for ranging from seventy to eighty each week, and the seventy well written, intelligent notes of application which come to my hand each time, are a clear indication that they are well read and appreciated.

As regards the conduct of the lads during the times they have been under my instruction, it has been in every way exemplary. I have only to point to the fact that in nine months I have not had to report a single lad for misconduct.

In the private individual instruction, learning catechisms, Scripture lessons, etc., I have made the work entirely voluntary on the part of the lads, and the work has been satisfactory. The Catechism, etc., of the church to which each boy belongs has been given to him on application, and is learned in spare moments in the playground or the dormitory, and I have been surprised at the amount of work accomplished without being considered in any way a "task."

His Lordship, the Bishop of Toronto, visited the Institution, with a number of clergy, on Thursday, July 22nd, and distributed about 60 prizes, which had been presented by friends, as a reward for Scripture lessons, etc.

In concluding my report I may say, that I have received many letters from lads after they have been discharged, and from the tone and contents I am convinced that the Reformatory has done good for them, both temporally and spiritually.

I have the honour to be, Sir,
Your obedient servant,

GEORGE LLOYD,
Protestant Chaplain.

ROMAN CATHOLIC CHAPLAIN'S REPORT.

ONTARIO REFORMATORY FOR BOYS,

PENETANGUISHENE, October 13th, 1886.

ROBERT CHRISTIE, ESQ.,
Inspector Prisons, etc.

SIR,—I have the honour to transmit the following report as Roman Catholic Chaplain of this Institution for the year ending 30th September, 1886.

On the 12th July of the present year I received my appointment as Roman Catholic Chaplain of the Reformatory. With regard to the spiritual and moral progress of the Catholic boys during the previous part of the year, I can only speak from what I found when I came here.

A strict observance at the religious services, a quiet attention at the different instructions, a careful and regular attendance at the reception of the sacraments, characterizes at least the majority of the Catholic inmates.

During the year, 17 Catholic boys come to the Institution. Of these, 7 had not received first communion and 12 had not received confirmation. 38 were discharged, of whom 6 were pardoned out for good conduct. At the present time there are 72 Catholic boys in the Institution. Prayers are said daily at 7:50 a.m., and 6:50 p.m.

On Sundays we have confessions and mass from 8 to 9:30, and catechism, with instruction, from 1 to 2 p.m.

The chapel accommodations are all that could be desired. Everything necessary for the celebration of the Holy Sacrifice is at hand, and every opportunity and advantage consistent with proper discipline is given the Chaplain for the performance of his spiritual functions. The boys are remarkably well instructed in their catechism, receiving lessons 6 days during the week in the Catholic School. The effects of this teaching are seen in the attentiveness they give to and in the clear understanding they seem to have of the religious instruction given them. Their increased moral progress must also be attributed in a very marked degree, to their diligence in this study.

We have a very fair library, consisting for the most part of light reading. However, many of the books are somewhat worn, and as the demand is constantly increasing it would be well were provision made for an addition to the present number of volumes.

On the 6th of the last month the Institution was honoured by a visit from His Grace, Archbishop Lynch and Monsignor O'Brien, papal delegate from Rome. His Grace, interviewed the boys one by one and the effect was noticeable in the increased number of confessions for weeks afterwards. Monsignor O'Brien delivered a most practical address to the lads, proving to them that their ordinary routine of life was nothing more than the college life that he himself and thousands of others had led, and that nothing remained between them and the highest success but energy and earnestness, backed up by religious principles.

At the present time, thanks to the good discipline that obtains in the Reformatory, it is easy to guage the moral standard of a boy, and work upon it accordingly.

Good dispositions are very prevalent and it seems safe to say that, with the efforts made to advance them by those who are in charge of the different departments, many, if not the majority, will be saved to become good members of society.

I am, Sir,
Your obedient servant,

P. F. McCABE,
Chaplain.

PROTESTANT SCHOOL MASTER'S REPORT.

ONTARIO REFORMATORY FOR BOYS,

PENETANGUISHENE, October 12th, 1886.

ROBT. CHRISTIE, ESQ.,
Inspector of Prisons, etc.

SIR,—I have the honour to transmit the following report as Senior Protestant Teacher in this Institution, for the year ending September 30th, 1886.

I am happy to say that I have been able, as heretofore, to perform the school-work without having been necessitated to formally report more than one or two boys for miscoudnct to the Superintendent. I have always striven to manage the boys under my control without having recourse to a higher authority than my own, humbly agreeing with Mr. Langmuir in his letter to the teachers of July 12th, 1881, in which he says: "The school-room in the Reformatory is the foundation of all discipline, and, if anything, it must be stricter and more continuous than in the public schools."

I again humbly call your attention to the importance of offering some inducement to encourage the boys to study, either by giving material rewards such as books, etc.,—not the best plan in this case—or by giving a boy to understand that when he has made a certain amount of progress in school, and has acquired sufficient knowledge of the three "R's" to fit him for the common business of every-day life—one of the desired ends of reformatory influence—he will, his general conduct being good, have established a claim to have his term of incarceration shortened. I believe the knowledge that, on his progress in school, the remission of part of his sentence greatly depended, would prove a great incentive to study.

I respectfully beg leave to add the testimony of sixteen years' experience to that portion of the Superintendent's Report of 1885, where he speaks of the bad effects of a boy being disappointed after efforts have been made for his release. In no department of the Institution has the baneful influence of this waited for, and oftentimes unaccomplished release, more marked effect than in the school-room, for here is essentially required the continuous exercise of the mental faculties, in order to attain beneficial results; and it is difficult to keep a boy's mind fixed on his studies while his fate is trembling in the balance. It would greatly promote the efficiency of the schools, and prevent the pernicious after-effects of the applications being refused, if the knowledge that efforts were being made for a boy's release were kept from him.

I enclose the usual statements of attendance, etc.

I have the honour to be, Sir,
Your obedient servant,

E. W. MURPHY,
Senior Protestant Teacher.

Report of Attendance.

	Quarter ending Dec. 31st, 1885.	Quarter ending Mar. 31st, 1886.	Quarter ending June 30th, 1886.	Quarter ending Sept. 30th, 1886.	Total.
Senior Teacher's Room :—					
Aggregate attendance	3797	4356	3659	2582	14394
Number of days taught, 264.					
Average daily attendance, 54 138-264.					
Agggregate non-atttendance—					
Causes. At work	265	195	385	259	1104
Causes. Sickness	6	76	23	12	117
Causes. Under punishment	38	11	25	12	86
					1307
Average daily non-attendance, 4 251-264.					
Assistant Teacher's Room :—					
Aggregate attendance	4299	3777	4840	4069	16985
Number of days taught, 261.					
Average daily attendance, 65 20-261.					
Aggregate non-attendance—					
Causes. At work	106	113	318	394	931
Causes. Sickness	83	92	149	132	456
Causes. Under punishment	52	60	1	81	194
					1581
Average daily non-attendance, 6 15-261.					
Total average daily attendance of Protestant Schools, 119.					
Total average daily non-attendance, 11.					

Number of Boys belonging to Protestant Schools, October 1st, 1886.

	Forenoon.	Afternoon.	Total.
Senior Teacher's Room	22	31	53
Assistant Teacher's Room	41	39	80
Total	63	70	133

STATEMENT shewing the number in each class October 1st, 1885, and position of the same September 30th, 1886.

—	No. in each Class, Oct. 1st, 1885.	POSITION ON SEPTEMBER 30TH, 1886.							Gone out.
		1st Class.	2nd J. Class.	2nd S. Class.	3rd J. Class.	3rd S. Class.	4th J. Class.	4th S. Class.	
4th Senior Class	12							4	8
4th Junior "	15						3	5	7
3rd Senior "	14					2	4	2	6
3rd Junior "	22				6	6	2		8
2nd Senior "	35			19	6	2	1		7
2nd Junior "	13		3	8					2
1st Class	16	7	2	4					3
	127								41

EDUCATIONAL Status of Boys received and discharged, etc., for year ending September 30th, 1886.

—	1st Class.	2nd J. Class.	2nd S. Class.	3rd J. Class.	3rd S. Class.	4th J. Class.	4th S. Class.	Total.
Received	18	18	4	6	2	.....	.....	48
Discharged, etc	3	2	7	8	7	7	8	42

ROMAN CATHOLIC SCHOOL MASTER'S REPORT.

ONTARIO REFORMATORY FOR BOYS,

PENETANGUISHENE, 13th October, 1886.

ROBERT CHRISTIE, ESQ.,
Inspector of Prisons, etc., Toronto, Ont.

SIR,—I have the honour to transmit this Report as Roman Catholic Teacher in the Ontario Reformatory for Boys, for the year ending September 30th, 1886.

The number of boys on the roll is seventy-two, a decrease of twenty-one. Six boys were liberated, one was transferred to the Protestant School, and thirty-one went out, making a total of thirty-eight boys who left the school during the year. Seventeen boys have been received.

I am pleased to say that no boy has been reported for misconduct in the Catholic School during the year.

I find that here as in outside schools the motto, "make the work interesting and good behaviour and industry will follow," is emphatically true. Hence it is that our boys with three hours earnest application daily are able to keep abreast with boys in the public schools.

As last year, I have confined my instructions mainly to reading, writing, arithmetic and composition. History, geography, and spelling contests have occasionally been introduced to keep up an interest in the work.

I have continued the plan of monthly examinations, with quarterly promotions, based on the system of merit marks, which shews the standing of each boy, both in his class and conduct. Although this materially increases the work of the teacher, the results are so gratifying that I should be sorry to discontinue it. I believe that if those results were placed before the Superintendent in the shape of a monthly or quarterly report, to be used for reference in case a boy's reprieve were sought, they would prove a powerful and healthy stimulus.

Some improvement has been made in the furnishing of the school, but it is still very defective in blackboard space, rendering the teaching of the various subjects, particularly that of arithmetic, doubly difficult.

I inclose statement of attendance, etc.

I have the honour to be, Sir,
Your obedient servant,

J. M. MAHONY.
Roman Catholic Teacher.

STATEMENT OF ATTENDANCE AND NON-ATTENDANCE.

	Quarter ending 31st [illegible], 1886. 76 days.	Quarter ending 31st March, 1886. 70 days.	Quarter ending 30th June, 1886. [illegible] days.	Quarter ending 30th Sept., 1886. 61 days.	Year—276½ days.
Aggregate attendance	5898	6142	5289	4102	21431
" non-attendance	469	349	540	605	1963
Average daily attendance	77.5	87.7	76.1	67.2	77.2
" " non-attendance	6.1	4.9	7.7	9.9	7.1
Roll	83.6	92.6	83.8	77.5	84.4

EDUCATIONAL Status of Boys received and discharged for year ending 30th September, 1886.

CLASS.	1st Class.	2nd Class.	3rd Class.	4th Class.	5th Class.	Total.
Received	8	4	5			17
Discharged	1	2	9	14	12	38
Present standing	6	21	19	15	11	72

RETURN

From the Records of the General Election to the Legislative Assembly in 1886, showing:—(1) The number of Votes polled for each Candidate in each Electoral District in which there was a contest. (2) The majority whereby each successful Candidate was returned. (3) The total number of Votes polled in each District. (4) The number of Votes remaining unpolled. (5) The number of names on the Voters List in each District. (6) The population of each District as shown by the last Census.

CHARLES T. GILLMOR,
Clerk of the Legislative Assembly.

Legislative Assembly,
Toronto, 1887.

RETURN from the Records of the General Election to the Legislative Assembly in 1886, shewing: (1) The number of Votes polled for each Candidate in each Electoral District in which there was a contest. (2) The majority whereby each successful Candidate was returned. (3) The total number of Votes polled in each District. (4) The number of Votes remaining unpolled. (5) The number of names on the Voters' List in each District. (6) The population of each District as shewn by the last Census.

Electoral District.	Names and Numbers of Polling Sub-Divisions.	Names of Candidates and No. of Votes Polled for Each.		Voters in each Sub-Division.			Ballot Papers sent out, and how Disposed of in each Sub-Division.							Tendered Ballot Papers sent out and how disposed of in each Sub-Division.			Population in each Constituency, as shewn by last Census.
				Total No. of Votes Polled.	No. of Votes remaining Unpolled.	No. of Names on the Voters' Lists.	No. of Ballot Papers sent out to each Sub-Division.	Used Ballot Papers.	Unused Ballot Papers.	Rejected Ballot Papers.	Spoiled Ballot Papers.	Ballot Papers given to Voters who afterwards declined to Vote.	Ballot Papers taken from Polling Places.	No. of Tendered Ballots sent out to each Sub-Division.	Used.	Unused.	
		Miller.	Deroche.														
Addington ..	Barrie	50— 50	46— 46	96	44	140	165	96	65	2	2	.....	.....	21	1	20	486
	Camden..... No. 1	75	63	138	64	202	250	138	112	....	....	.....	.....	21	.....	21	
	do .. .. " 2	134	45	179	78	257	290	179	110	1	....	.....	.....	21	4	17	
	do ..... " 3	118	105	223	86	309	355	223	132	....	....	.....	.....	21	1	20	5134
	do ..... " 4	69	96	165	57	222	261	165	96	....	....	.....	.....	21	7	14	
	do .. .. " 5	76	53	129	39	168	201	129	71	1	....	.....	.....	21	.....	21	
	do ..... " 6	591—119	442— 80	199	34	233	284	199	83	....	2	.....	.....	21	.....	21	
	Clarendon and Miller..	28— 28	115—115	143	68	211	235	143	91	1	....	.....	....	22	.....	22	685
	Denbigh, Abinger and Ashby .....No. 1	40	27	67	37	104	125	67	57	....	1	.....	.....	22	.....	22	
	do " 2	60— 20	47— 20	40	21	61	80	40	40	....	....	.....	.....	21	.....	21	621
	Hinchinbrook.... " 1	78	39	117	36	153	170	117	49	4	....	.....	.....	21	.....	21	
	do .... " 2	61	33	94	11	105	125	94	30	1	....	.....	.....	21	2	19	1322
	do .... " 3	140— 1	110— 38	39	8	47	60	39	21	....	....	.....	.....	21	.....	21	
	Kennebec.. ..... " 1	150—150	13— 13	163	113	276	299	163	104	31	1	.....	.....	21	.....	21	1149
	Kaladar, Anglesea and Effingham . " 1	63	79	142	80	222	246	142	101	3	....	.....	.....	23	.....	23	
	do " 2	75— 12	104— 25	37	27	64	82	37	44	....	1	.....	.....	20	1	19	990
	Newburgh	75— 75	60— 60	135	74	209	249	135	110	3	1	.....	.....	21	3	18	834
	Olden.....	113—113	75— 75	188	64	252	269	188	73	8	....	.....	..	20	1	19	829
	Oso..... ..... No. 1	55	59	114	56	170	200	114	83	....	3	.....	.....	21	.....	21	
	do ..... " 2	29	14	43	22	65	81	43	34	4	....	.....	.....	21	.....	21	959
	do .... " 3	146— 62	81— 8	70	20	90	115	70	42	3	....	.....	.....	21	.....	21	

| | | |

RETURN from the Records of the General Election to the Legislative Assembly in 1886, etc.—*Continued.*

Electoral District.	Names and Numbers of Polling Sub-Divisions.	Names of Candidates and No. of Votes Polled for Each.			Votes in each Sub-Division.			Ballot Papers sent out, and how Disposed of in each Sub-Division.								Tendered Ballot Papers sent out and how disposed of in each Sub-Division.			Population in each Constituency, as shewn by last Census.
		Hardy.	Jones.		Total No. of Votes Polled.	No. of Votes remaining Unpolled.	No. of Names on the Voters' Lists.	No. of Ballot Papers sent out to each Sub-Division.	Used Ballot Papers.	Unused Ballot Papers.	Rejected Ballot Papers.	Spoiled Ballot Papers.	Ballot Papers given to Voters who afterwards declined to Vote.	Ballot Papers taken from Polling Places.	No. of Tendered Ballots sent out to each Sub-Division.	Used.	Unused.	
Brant, S. R.	City of Brantford...No. 1	55	48		103	102	205	185	103	80	2	.....	.....	.....	19	.....	19	9618
do	" 2	62	38		100	77	177	185	100	84	1	.....	.....	.....	19	.....	19	
do	" 3	72	39		111	104	215	185	111	74	.....	.....	.....	.....	19	.....	19	
do	" 4	115	31		146	87	233	185	146	39	.....	.....	.....	.....	17	.....	17	
do	" 5	56	75		131	70	201	200	131	69	.....	.....	.....	.....	19	.....	19	
do	" 6	30	18		48	63	111	185	48	136	.....	1	.....	.....	18	.....	18	
do	" 7	41	31		72	88	160	185	72	113	.....	.....	.....	.....	19	.....	19	
do	" 8	55	26		81	70	151	173	81	90	2	.....	.....	.....	18	.....	18	
do	" 9	46	29		75	73	148	185	75	110	.....	.....	.....	.....	18	.....	18	
do	" 10	50	36		86	83	169	185	86	98	1	.....	.....	.....	19	.....	19	
do	" 11	75	42		117	87	204	185	117	66	1	1	.....	.....	19	.....	19	
do	" 12	68	31		99	91	190	198	99	99	.....	.....	.....	.....	19	1	18	
do	" 13	71	48		119	113	232	185	119	66	.....	.....	.....	.....	19	.....	19	
do	" 14	59	56		115	111	226	185	115	69	1	.....	.....	.....	19	2	17	
do	" 15	61	53	601—	114	108	222	185	114	71	.....	.....	.....	.....	19	2	19	
Tp. of Brantford	" 1	70	29		99	53	152	185	99	86	.....	.....	.....	.....	19	.....	19	
do	" 2	47	37		84	49	133	185	84	100	.....	1	.....	.....	19	.....	19	
do	" 3	27	24		51	15	66	185	51	134	.....	.....	.....	.....	19	1	18	3063
do	" 4	81	43		124	42	166	199	124	75	.....	.....	.....	.....	19	1	18	
do	" 5	35	25		60	47	107	183	60	122	1	1	.....	.....	19	.....	19	
do	" 6	70	19	330—	89	26	115	200	89	110	.....	.....	.....	.....	19	.....	19	
Burford	" 1	62	45		107	74	181	201	107	94	.....	.....	.....	.....	19	5	14	
do	" 2	52	52		104	48	152	185	104	81	.....	.....	.....	.....	18	.....	18	
do	" 3	40	40		80	42	122	185	80	104	1	.....	.....	.....	18	2	17	
do	" 4	58	44		102	42	144	200	102	96	1	1	.....	.....	18	.....	18	
do	" 5	62	30		92	77	169	200	92	108	.....	.....	.....	.....	18	.....	18	5466
do	" 6	64	46		110	73	183	185	110	74	1	.....	.....	.....	19	.....	19	
do	" 7	62	44		106	48	154	185	106	79	.....	.....	.....	.....	19	.....	19	

RETURN from the Records of the General Election to the Legislative Assembly in 1886.—*Continued.*

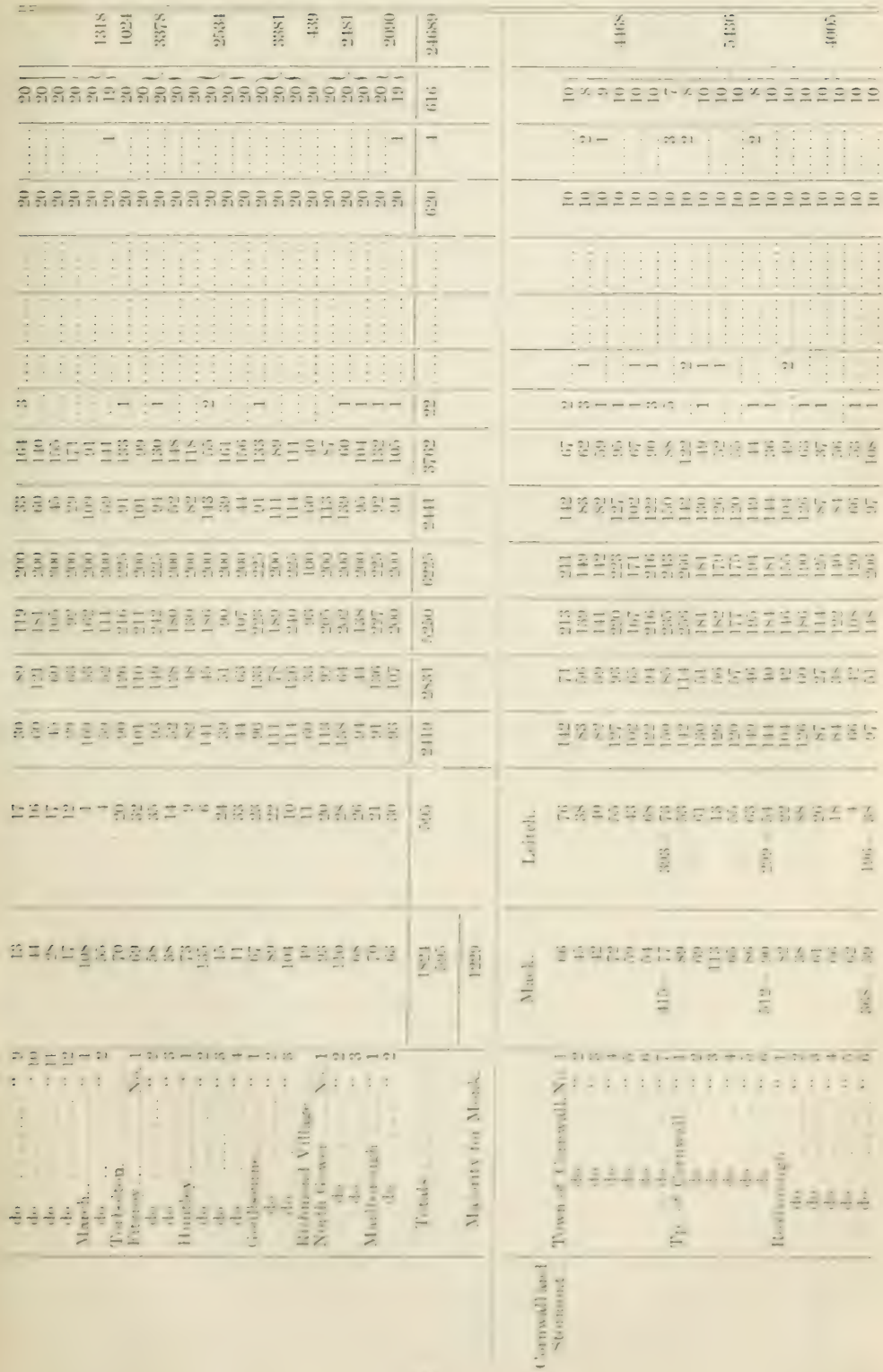
Electoral District.	Names and Numbers of Polling Sub-Divisions.	Names of Candidates and No. of Votes Polled for Each.		Voters in each Sub-Division.			Ballot Papers sent out and how Disposed of in each Sub-Division.							Tendered Ballot Papers sent out and how disposed of in each Sub-Division.			Population in each Constituency, as shown by last Census.
				Total No. of Votes Polled.	No. of Votes remaining Unpolled.	No. of Names on the Voters' List.	No. of Ballot Papers sent out to each Sub-Division.	Used Ballot Papers.	Unused Ballot Papers.	Rejected Ballot Papers.	Spoiled Ballot Papers.	Ballot Papers given to Voters who afterwards declined to Vote.	Ballot Papers taken from Polling Places.	No. of Tendered Ballots sent out to each Sub-Division.	Used.	Unused.	
		Biggar.	Kilbourn.														
Bruce, N. R.	Lindsay and St. Edmunds.....No. 1	15	13	28	10	38	40	28	12	....	....	.....	.....	10	.....	10	
	do .. " 2	26	3	29	15	44	41	29	12	....	....	.....	.....	10	4	6	
	do .. " 3	10	11	21	16	37	40	21	18	....	1	.....	.....	10	.....	10	
	do .. " 4	62— 11	42— 15	26	8	34	40	26	13	1	....	.....	.....	10	1	9	1364
	Eastnor..... " 1	51	54	105	43	148	150	105	44	....	1	.....	.....	15	14	1	
	do ..... " 2	50	12	62	26	88	90	62	27	....	1	.....	.....	12	1	11	
	do ..... " 3	125— 24	70— 4	28	14	42	41	28	13	....	....	.....	.....	10	.....	10	
	Albemarle..... " 1	38	9	47	22	69	70	47	23	....	....	.....	.....	12	.....	12	
	do ..... " 2	18	22	40	31	71	70	40	30	....	....	.....	.....	12	.....	12	
	do ..... " 3	57	21	78	50	128	125	78	47	....	....	.....	.....	15	1	14	1505
	do ..... " 4	151— 38	64— 12	50	33	83	80	50	30	....	....	.....	.....	13	.....	13	
	Amabel..... " 1	83	51	134	50	184	181	134	47	....	....	.....	.....	20	2	18	
	do ..... " 2	63	31	94	55	149	150	94	55	1	....	.....	.....	15	.....	15	
	do .... " 3	81	41	122	69	191	190	122	68	....	....	.....	.....	20	2	18	3046
	do ..... " 4	292— 65	141— 18	83	45	128	127	83	38	6	....	.....	.....	15	3	12	
	Arran..... " 1	65	63	128	52	180	180	128	52	....	....	.....	.....	20	7	13	
	do ..... " 2	142	19	161	30	191	190	161	29	....	....	.....	.....	15	3	12	
	do ..... " 3	98	44	142	44	186	180	142	35	2	1	.....	.....	20	3	17	3512
	do ..... " 4	30	38	68	38	106	100	68	32	....	....	.....	.....	12	.....	12	
	do ..... " 5	384— 49	181— 17	66	36	102	100	66	33	1	....	.....	.....	12	4	8	
	Saugeen..... " 1	34	32	66	33	99	100	66	32	2	....	.....	.....	12	3	9	
	do ..... " 2	8	54	62	24	86	80	62	18	....	....	.....	.....	12	1	11	
	do .... " 3	28	55	83	22	105	100	83	17	....	....	.....	.....	12	.....	12	2090
	do ..... " 4	3	69	72	16	88	90	72	18	....	....	.....	.....	12	.....	12	
	do ..... " 5	89— 16	268— 58	74	19	93	90	74	15	1	....	.....	.....	12	.....	12	

RETURN from the Records of the General Election to the Legislative Assembly in 1886, etc.—*Continued.*

Electoral District.	Names and Numbers of Polling Sub-Divisions.	Names of Candidates and No. of Votes Polled for Each.		Voters in each Sub-Division.			Ballot Papers sent out, and how disposed of in each Sub-Division.							Tendered Ballot Papers sent out and how disposed of in each Sub-Division.			Population in each Constituency, as shewn by last Census.
				Total No. of Votes Polled.	No. of Votes remaining Unpolled.	No. of Names on the Voters' Lists.	No. of Ballot Papers sent out to each Sub-Division.	Used Ballot Papers.	Unused Ballot Papers.	Rejected Ballot Papers.	Spoiled Ballot Papers.	Ballot Papers given to Voters who afterwards declined to Vote.	Ballot Papers taken from Polling Places.	No. of Tendered Ballots sent out to each Sub-Division.	Used.	Unused.	
		O'Connor.	Klein.														
Bruce, S.R.—*Continued.*	Teeswater.....No. 1	53	22	75	33	108	108	75	32	1	....	.....	.....	10	10	....	861
	do ..... " 2	122— 69	62— 40	109	56	165	165	109	56	....	....	.....	.....	10	1	9	
	Kinloss ..... " 1	38	87	125	50	175	175	125	50	....	....	.....	.....	10	10	....	3628
	do ..... " 2	97	65	162	20	182	182	162	17	1	2	.....	.....	10	1	9	
	do ..... " 3	122	17	139	43	182	182	139	40	3	....	.....	.....	10	7	3	
	do ..... " 4	353— 96	191— 22	118	44	162	162	118	44	....	....	.....	.....	10	1	9	
	Lucknow.....North	77	35	112	58	170	170	112	58	....	....	.....	.....	10	1	9	718
	do .....South	129— 52	63— 28	80	33	113	113	80	33	....	....	.....	.....	10	2	8	
	Totals.....	2024 1677	1677	3701	1250	4951	4949	3701	1204	27	17	.....	.....	304	81	223	22950
	Majority for O'Connor.	347															
		Dack.	Baird.														
Bruce, C. R..	Greenock .....No. 1	55	30	85	18	103	125	85	51	....	....	.....	.....	10	1	9	3751
	do ..... " 2	28	37	65	21	86	100	65	34	....	1	.....	....	10	.....	10	
	do ..... " 3	71	82	153	48	201	210	153	57	....	....	.....	.....	10	1	9	
	do ..... " 4	76	89	165	36	201	210	165	43	2	....	.....	.....	10	.....	10	
	do ..... " 5	38	69	107	63	170	175	107	67	....	1	.....	.....	10	.....	10	
	do ..... " 6	282— 14	339— 32	46	17	63	100	46	54	....	....	.....	.....	10	10	....	
	Kincardine..... " 1	85	99	184	58	242	260	184	73	2	1	.....	...	10	2	8	4506
	do ..... " 2	53	139	192	63	255	260	192	54	5	1	.....	.....	10	2	8	
	do ..... " 3	61	57	118	43	161	175	118	56	1	....	.....	.....	10	....	10	
	do ..... " 4	78	41	119	40	159	175	119	63	....	2	.....	.....	10	1	9	
	do ..... " 5	375— 98	350— 14	112	45	157	175	112	62	....	1	.....	.....	10	10	....	

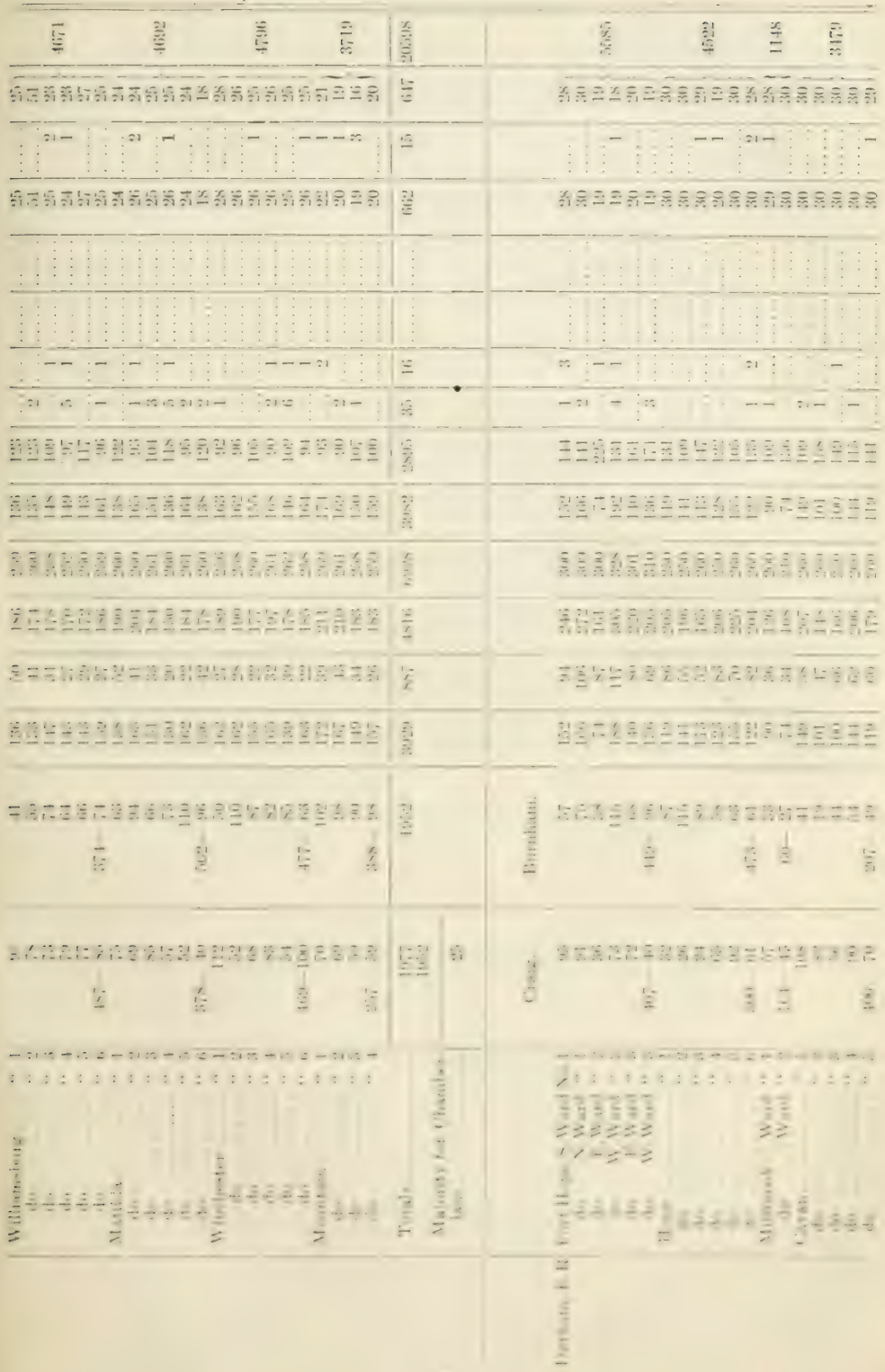
RETURN from the Records of the General Election to the Legislative Assembly in 1886, etc.—*Continued.*

Electoral District.	Names and Numbers of Polling Sub-Divisions.	Names of Candidates and No. of Votes Polled for Each.		Voters in each Sub-Division.			Ballot Papers sent out, and how disposed of in each Sub-Division.							Tendered Ballot Papers sent out and how disposed of in each Sub-Division.			Population in each Constituency, as shewn by last Census.
				Total No. of Votes Polled.	No. of Votes remaining Unpolled.	No. of names on the Voters' Lists.	No. of Ballot Papers sent out to each Sub-Division.	Used Ballot Papers.	Unused Ballot Papers.	Rejected Ballot Papers.	Spoiled Ballot Papers.	Ballot Papers given to Voters who afterwards declined to Vote.	Ballot Papers taken from Polling Places.	No. of Tendered Ballots sent out to each Sub-Division.	Used.	Unused.	
		Hammill.	Proctor.														
Cardwell—*Continued.*	Tecumseth.....No. 1	54	45	99	44	143	165	99	66	....	....	.....	.....	15	.....	15	
	do ..... " 2	63	44	107	33	140	166	107	58	1	....	.....	.....	15	.....	15	
	do ..... " 3	56	25	81	86	167	211	81	130	....	....	.....	.....	14	.....	14	5325
	do ..... " 4	57	45	102	66	168	190	102	87	1	....	.....	.....	15	.....	15	
	do ..... " 5	58	30	88	93	181	208	88	120	....	....	.....	.....	10	.....	10	
	do ..... " 6	348— 60	203— 14	74	66	140	165	74	91	....	....	.....	.....	15	.....	15	
	Beeton.....	54— 54	20— 20	74	78	152	157	74	83	....	....	.....	.....	10	.....	10	
	Bolton.....	57— 57	57— 57	114	32	146	200	114	86	....	....	.....	.....	20	.....	20	606
	Tottenham.....	54— 54	37— 37	91	62	153	171	91	80	....	....	.....	.....	15	.....	15	
	Bradford.....No. 1	54	44	98	60	158	201	98	101	2	....	.....	.....	15	.....	15	
	do ..... " 2	85— 31	75— 31	62	35	97	185	62	122	1	....	.....	.....	15	1	14	1176
	Totals.....	1805 1218	1218	3023	2186	5209	6283	3023	3237	12	10	1	.....	506	6	500	22351
	Majority for Hammill	587															
		Monk.	Henderson.														
Carleton.....	Nepean..... No. 1	44	20	64	108	172	200	65	134	1	....	.....	.....	20	.....	20	
	do ..... " 2	22	36	58	74	132	200	59	140	1	....	.....	.....	20	.....	20	
	do ..... " 3	63	10	73	47	120	200	73	127	....	....	.....	.....	20	.....	20	
	do ..... " 4	67	22	89	97	186	200	89	111	....	....	.....	.....	20	1	19	
	do ..... " 5	69	18	87	133	220	200	93	101	6	....	.....	.....	20	.....	20	
	do ..... " 6	30	11	41	112	153	200	42	157	1	....	.....	.....	20	.....	20	
	do ..... " 7	42	30	72	128	200	200	72	128	....	....	.....	.....	20	1	19	8044
	do ..... " 8	40	17	57	161	218	200	58	141	1	....	.....	.....	20	.....	20	



RETURN from the Records of the General Election to the Legislative Assembly in 1886, etc.—*Continued.*

Election District.	Names and Numbers of Polling Sub-Division.	Names of Candidates and No. of Votes Polled for each.		Voters in each Sub-Division.			Ballot Papers sent out, and how disposed of in each Sub-Division.							Tendered Ballot Papers sent out and how disposed of in each Sub-Division.			Population in each Constituency, as shewn by last Census.
				Total No. of Votes Polled.	No. of Votes remaining Unpolled.	No. of Names on the Voters' Lists.	No. of Ballot Papers sent out to each Sub-Division.	Used Ballot Papers.	Unused Ballot Papers.	Rejected Ballot Papers.	Spoiled Ballot Papers.	Ballot Papers given to Voters who afterwards declined to Vote.	Ballot Papers taken from Polling Places.	No. of Tendered Ballots sent out to each Sub-division.	Used.	Unused.	
Cornwall and Stormont—*Continued.*		Mack.	Leitch.														
	Finch ..... " 1	45	61	106	20	126	115	106	9	....	....	.....	.....	10	.....	10	
	do ..... " 2	66	40	106	42	148	144	106	37	1	....	.....	.....	10	.....	10	
	do ..... " 3	82	39	121	39	160	150	121	28	1	....	.....	.....	10	1	9	3493
	do ..... " 4	58	20	78	62	140	138	78	60	....	....	.....	.....	10	.....	10	
	do ..... " 5	305 – 54	238 – 78	132	35	167	165	132	32	....	1	.....	.....	10	.....	10	
	Osnabruck..... " 1	75	79	154	34	188	195	154	40	1	....	.....	.....	10	.....	10	
	do ..... " 2	89	98	187	58	245	250	187	62	....	1	.....	.....	10	.....	10	
	do ..... " 3	41	93	134	53	187	200	134	64	....	2	.....	.....	10	.....	10	
	do ..... " 4	48	67	115	28	143	155	115	40	....	....	.....	.....	10	.....	10	5796
	do ..... " 5	83	126	209	76	285	290	209	81	....	....	.....	.....	10	.....	10	
	do ..... " 6	69	46	115	38	153	165	115	50	....	....	.....	.....	10	.....	10	
	do ..... " 7	468 – 63	602 – 93	156	33	189	200	156	42	....	2	.....	.....	10	.....	10	
	Totals.....	2068 1728	1728	3796	1665	5461	5634	3796	1797	26	15	.....	.....	310	11	299	23198
	Majority for Mack...	340															
Dufferin.....	.....	Stewart.....		By Acclamation.													23883
		Chamberlain.	Whitney.														
Dundas	Iroquois	117—117	95— 95	212	67	279	466	216	246	2	2	.....	.....	24	.....	24	1001
	Morrisburg ..... No. 1	98	36	134	33	167	253	138	111	...	4	.....	.....	25	.....	25	1719
	do ..... " 2	92	38	130	34	164	241	130	111	....	....	.....	.....	25	2	23	
	do ..... " 3	269— 79	116— 42	121	26	147	256	121	135	....	....	.....	.....	30	.....	30	



RETURN from the Records of the General Election to the Legislative Assembly in 1886, etc.—*Continued.*

Electoral District.	Names and Numbers of Polling Sub-Divisions.	Names of Candidates and No. of Votes Polled for Each.		Voters in each Sub-Division.			Ballot Papers sent out, and how disposed of in each Sub-Division.							Tendered Ballot Papers sent out and how disposed of in each Sub-Division.			Population in each Constituency, as shewn by last Census.
				Total No. of Votes Polled.	No. of Votes remaining Unpolled.	No. of names on the Voters' List.	No. of Ballot Papers sent out to each Sub-Division.	Used Ballot Papers.	Unused Ballot Papers.	Rejected Ballot Papers.	Spoiled Ballot Papers.	Ballot Papers given to Voters who afterwards declined to Vote.	Ballot Papers taken from Polling Places.	No. of Tendered Ballots sent out to each Sub-Division.	Used.	Unused.	
Durham, E. R.—*Con.*		Craig.	Burnham.														
	Manvers ..... No. 1	50	18	68	106	174	260	68	192	....	....	.....	.....	30	.....	30	
	do ..... " 2	86	26	112	49	161	200	112	87	1	....	.....	.....	30	.....	30	
	do ..... " 3	97	8	105	50	155	250	105	144	....	1	.....	.....	30	.....	30	
	do ..... " 4	94	25	119	59	178	260	119	141	....	....	.....	.....	30	.....	30	3976
	do ..... " 5	91	14	105	53	158	260	105	154	....	1	.....	.....	30	.....	30	
	do ..... " 6	479— 61	124— 33	94	40	134	260	94	165	....	1	.....	.....	30	1	29	
	Totals.....	1696 1313	1313	3009	1701	4710	6568	3018	3522	17	11	.....	.....	694	8	686	18710
	Majority for Craig...	383															
Durham, W.		McLaughlin.	Power.														
	Bowmanville, West Ward No. 1	53	59	112	60	172	250	112	138	....	....	.....	.....	20	2	18	
	do do " 2	57	76	133	35	168	205	133	72	....	....	.....	.....	20	.....	20	
	do North Ward " 1	69	73	142	76	218	205	142	63	....	....	.....	.....	20	.....	20	
	do do " 2	85	65	150	61	211	205	150	51	3	1	.....	.....	25	.....	25	3504
	do South Ward " 1	50	70	120	44	164	205	120	85	....	....	.....	.....	20	1	19	
	do do " 2	349— 35	406— 63	98	18	116	205	98	104	1	2	.....	.....	25	.....	25	
	Darlington..... " 1	100	27	127	48	175	205	127	77	1	....	.....	.....	20	.....	20	
	do ..... " 2	90	62	152	56	207	240	152	86	1	1	.....	.....	20	.....	20	
	do ..... " 3	67	34	101	57	158	250	101	149	....	....	.....	.....	20	1	19	
	do ..... " 4	92	56	148	63	211	205	148	57	....	....	.....	.....	20	.....	20	5465
	do ..... " 5	69	58	127	42	169	205	127	78	....	....	.....	.....	20	.....	20	
	do ..... " 6	90	35	125	51	176	205	125	79	1	....	.....	.....	20	.....	20	
	do ..... " 7	616—108	316— 44	152	61	213	205	152	52	1	....	.....	.....	20	1	19	

RETURN from the Records of the General Election to the Legislative Assembly in 1886, etc.—*Continued.*

Electoral District.	Names and Numbers of Polling Sub-Divisions.	Names of Candidates and No. of Votes Polled for Each.		Voters in each Sub-Division.			Ballot Papers sent out and how Disposed of in each Sub-Division.							Tendered Ballot Papers sent out and how disposed of in each Sub-Division.			Population in each Constituency, as shewn by last Census.
				Total No. of Votes Polled.	No. of Votes remaining Unpolled.	No. of Names on the Voters' List.	No. of Ballot Papers sent out to each Sub-Division.	Used Ballot Papers.	Unused Ballot Papers.	Rejected Ballot Papers.	Spoiled Ballot Papers.	Ballot Papers given to Voters who afterwards declined to Vote.	Ballot Papers taken from Polling Places.	No. of Tendered Ballots sent out to each Sub-Division.	Used.	Unused.	
		Nairn.	Marlatt.														
Elgin, E.R.—*Continued.*	Springfield	60	37	97	56	153	165	97	68	....	....	.....	.....	20	... ..	20	555
	Vienna	45	41	86	34	120	120	90	26	4	....	.....	.....	20	.....	20	528
	Port Stanley	383— 22	324 - 62	84	39	123	125	87	38	....	....	.....	.....	20	.....	20	674
	Totals	1873 1783	1783	3656	1735	5391	5578	3691	1857	23	7	.....	.....	560	14	546	19780
	Majority for Nairn..	90															
		Ingram.	Coyne.														
Elgin, W.R..	Aldboro' ..... No. 1	106	68	174	58	232	250	174	76	....	....	.....	.....	20	.....	20	4718
	do ..... " 2	34	74	108	48	156	175	108	67	....	....	.....	.....	20	.....	20	
	do ..... " 3	62	80	142	41	183	200	142	58	....	....	.....	.....	20	.....	20	
	do ..... " 4	82	58	140	24	164	175	140	34	1	....	.....	.....	20	.....	20	
	do ..... " 5	42	73	115	35	150	175	115	58	....	2	.....	.....	20	.....	20	
	do ..... " 6	402— 76	437— 84	160	62	222	250	160	87	3	....	.....	.....	20	... ..	20	
	Dunwich ..... " 1	80	76	156	30	186	200	156	43	1	.. ..	.....	.....	20	2	18	4290
	do ..... " 2	66	76	142	35	177	200	142	58	....	....	.....	.....	20	.....	20	
	do ..... " 3	25	85	110	52	162	175	110	65	....	....	.....	.....	20	.....	20	
	do ..... " 4	26	78	104	37	141	150	104	45	1	....	.....	.....	20	.....	20	
	do ..... " 5	33	115	148	39	187	200	148	52	....	....	.....	.....	20	1	19	
	do ..... " 6	53	89	142	29	171	200	142	55	3	....	.....	.....	20	3	17	
	do ..... " 7	50	56	106	26	132	140	106	34	....	....	.....	.....	20	4	16	
	do ..... " 8	368— 35	641— 66	101	29	130	140	101	37	2	....	.....	.....	20	2	18	

RETURN from the Records of the General Election to the Legislative Assembly in 1886, etc.—*Continued.*

Electoral District.	Names and Numbers of Polling Sub-Divisions.	Names of Candidates and No. of Votes Polled for Each.		Voters in each Sub-Division.			Ballot Papers sent out, and how Disposed of in each Sub-Division.							Tendered Ballot Papers sent out and how disposed of in each Sub-Division.			Population in each Constituency, as shewn by last Census.
				Total No. of Votes Polled.	No. of Votes remaining Unpolled.	No. of Names on the Voters' Lists.	No. of Ballot Papers sent out to each Sub-Division.	Used Ballot Papers.	Unused Ballot Papers.	Rejected Ballot Papers.	Spoiled Ballot Papers.	Ballot Papers given to Voters who afterwards declined to Vote.	Ballot Papers taken from Polling Places.	No. of Tendered Ballots sent out to each Sub-Division.	Used.	Unused.	
		Pacaud.	White.														
Essex, N. R. *Continued.*	Sandwich W..... " 1	77	36	113	75	188	212	113	97	2	.....	.....	.....	14	.....	14	2860
	do ..... " 2	88	62	150	40	190	215	150	65	.....	.....	.....	.....	14	.....	14	
	do ..... " 3	45	43	88	41	129	154	88	66	.....	.....	.....	.....	15	.....	15	
	do ..... " 4	239 29	176 — 35	64	72	136	161	64	97	.....	.....	.....	.....	14	9	5	
	Sandwich E..... " 1	23	50	73	48	121	146	73	73	.....	.....	.....	.....	14	.....	14	4386
	do ..... " 2	77	84	161	34	195	220	161	59	.....	.....	.....	.....	14	3	11	
	do ..... " 3	79	69	148	3	151	207	148	58	1	.....	.....	.....	14	.....	14	
	do ..... " 4	50	39	89	88	177	204	89	115	.....	.....	.....	.....	14	1	13	
	do ..... " 5	71	55	126	75	201	228	126	102	.....	.....	.....	.....	14	.....	14	
	do ..... " 6	341 — 41	368 — 71	112	57	169	194	112	77	5	.....	.....	.....	14	.....	14	
	Maidstone..... " 1	49	61	110	28	138	163	110	52	1	.....	.....	.....	14	1	13	3260
	do ..... " 2	53	49	102	46	148	173	102	69	.....	2	.....	.....	14	.....	14	
	do ..... " 3	33	19	52	82	134	159	52	105	1	1	.....	.....	14	.....	14	
	do ..... " 4	23	26	49	91	140	165	49	111	.....	1	1	.....	14	.....	14	
	do ..... " 5	197 — 39	171 — 16	55	66	121	146	55	89	1	1	.....	.....	14	.....	14	
	Rochester..... " 1	58	27	85	50	135	161	85	73	3	.....	.....	.....	14	.....	14	2483
	do ..... " 2	32	34	66	67	133	158	66	92	.....	.....	.....	.....	14	.....	14	
	do ..... " 3	26	32	58	36	94	119	58	59	2	.....	.....	.....	14	1	13	
	do ..... " 4	181 — 65	117 — 24	89	68	157	182	89	93	.....	.....	.....	.....	14	.....	14	
	Belle River.....	86 — 86	32 — 32	118	52	170	195	118	76	1	.....	.....	.....	14	1	13	556
	Totals.....	1729	1650	3379	2395	5774	6844	3379	3412	33	19	1	.....	673	41	632	23655
		1650															
	Majority for Pacaud..	79															

RETURN from the Records of the General Election to the Legislative Assembly in 1886, etc.—*Continued.*

Electoral District.	Names and Numbers of Polling Sub-Divisions.	Names of Candidates and No. of Votes Polled for Each.		Votes in each Sub Division.			Ballot Papers sent out, and how Disposed of in each Sub-Division.						Tendered Ballot Papers sent out and how disposed of in each Sub-Division.			Population in each Constituency, as shewn by last Census.
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		Wilmot.	McGrath.													
Frontenac.—*Continued.*	Pittsburgh.....No. 1	83	47	130	54	184	194	64	130	....	....	....	....	10	....	....	3352
	do ..... " 2	52	48	100	73	173	184	84	100	....	....	....	....	10	....	....	
	do ..... " 3	43	57	100	51	151	161	61	100	....	....	....	....	9	....	....	
	do ..... " 4	256— 78	172— 20	98	84	182	192	94	98	....	....	....	....	10	....	....	
	Storrington..... " 1	62	33	95	53	148	158	63	95	....	....	....	....	8	....	....	2811
	do ..... " 2	72	75	147	57	204	214	67	147	....	....	....	....	11	....	....	
	do ..... " 3	59	37	96	87	183	193	97	96	....	....	....	....	10	....	....	
	do ..... " 4	202— 9	146— 2	11	24	35	45	34	11	....	....	....	....	3	....	....	
	Loughborough.... " 1	70	44	114	48	162	172	58	114	....	....	....	....	9	....	....	2394
	do .... " 2	14	15	59	63	122	132	73	59	....	....	....	....	8	....	....	
	do .... " 3	27	35	62	36	98	108	46	62	....	....	....	....	5	....	....	
	do .... " 4	201— 60	110 16	76	72	148	158	82	76	....	....	....	....	8	....	....	
	Portland ..... " 1	32	14	46	56	102	112	66	46	....	....	....	....	6	....	....	2452
	do ..... " 2	110	16	126	70	196	206	80	126	....	....	....	....	11	....	....	
	do ..... " 3	58	3	61	39	100	110	49	61	....	....	....	....	6	....	....	
	do ..... " 4	61	17	78	93	171	110	32	78	....	....	....	....	9	....	....	
	do ..... " 5	279— 18	87 - 37	55	51	106	116	.	55	....	....	....	....	6	....	....	
	Bedford..... " 1	74	95	169	71	240	250	81	169	....	....	....	....	8	....	....	2019
	do ..... " 2	23	4	27	11	38	48	24	27	....	....	....	....	3	....	....	
	do ..... " 3	115 18	106 7	25	12	37	47	22	25	....	....	....	....	3	....	....	
	Totals.....	1218	863	2081	1415	3496	3675	2081	1594	....	....	....	....	190	....	....	16385
		863															
	Majority for Wilmot.	355															

RETURN from the Records of the General Election to the Legislative Assembly in 1886.—*Continued.*

Electoral District.	Names and Numbers of Polling Sub-Divisions.	Names of Candidates and No. of Votes Polled for Each.			Voters in each Sub-Division.			Ballot Papers sent out and how Disposed of in each Sub-Division.							Tendered Ballot Papers sent out and how disposed of in each Sub-Division.			Population in each Constituency, as shewn by last Census.
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		French.	Buchanan	Richards.														
Grenville—*Continued.*	Edwardsburgh .... " 1	60	64	....	124	54	178	180	124	53	1	2	.....	.....	17	.....	17	
	do .... " 2	63	40	.....	103	50	153	160	103	55	2	....	.....	.....	17	.....	17	
	do .... " 3	57	29	1	87	47	134	140	87	53	....	.....	.....	.....	17	.....	17	
	do .... " 4	50	49	.....	99	58	157	160	99	59	1	1	.....	.....	17	.....	17	5431
	do .... " 5	35	72	....	107	27	134	140	107	30	....	3	.....	.....	17	.....	17	
	do .... " 6	36	48	1	85	41	126	130	85	44	....	1	.....	.....	17	.....	17	
	do .... " 7	66	17	.....	83	37	120	125	83	42	....	....	.....	.....	17	.....	17	
	do .... " 8	413 – 46	347— 28	3— 1	75	39	114	120	75	45	....	....	.....	.....	17	.....	17	
	South Gower..... " 1	61	39	1 1	101	29	130	135	101	32	2	....	.....	.....	17	.....	17	1022
	do ..... " 2	86 – 25	99— 60	.....	85	46	131	135	85	50	....	....		.....	17	.....	17	
	Kemptville..... " 1	48	46	.....	94	47	141	145	94	50	....	1	....	.....	17	1	16	1188
	do ..... " 2	115— 67	66— 20	.....	87	41	128	130	87	42	1	....	.....	.....	17	.. ..	17	
	Oxford..... " 1	79	16	....	95	63	158	165	95	69	....	1	.....	.....	17	.....	17	
	do ..... " 2	52	11	.....	63	84	147	156	63	86	1	....	.....	.....	17	.....	17	
	do ..... " 3	67	27	.....	94	88	182	190	94	95	1	....	.....	.....	17	.....	17	
	do ..... " 4	63	15	.....	78	77	155	160	78	82	....	....	.....	.....	17	.....	17	3785
	do ..... " 5	45	18	.....	63	50	113	120	63	55	2	....	.....	.....	17	.....	17	
	do ..... " 6	362— 56	144— 57	.....	113	60	173	180	113	67	....	....	.....	...	17	2	15	
	Merrickville..... " 1	58 – 58	65— 65	.....	123	55	178	185	123	61	....	1	.....	.....	17	.....	17	819
	Wolford ..... " 1	91	12	.....	103	77	180	185	103	80	2	....	.....	.....	20	....	20	
	do ..... " 2	53	32	.....	85	49	134	140	85	53	....	2	.....	.....	20	.....	20	2401
	do ..... " 3	217— 73	108— 64	1 – 1	138	71	209	215	138	75	2	....	.....	.....	20	....	20	
	Totals.....	1978 1428	1428	14	3420	1973	5393	5600	3420	2123	23	34	.....	.. ...	596	5	591	22741
	Majority for French ..	550																

RETURN from the Records of the General Election to the Legislative Assembly in 1886, etc. *Continued.*

Electoral District.	Names and Numbers of Polling Sub-Division.	Names of Candidates and No. of Votes Polled for each.			Voters in each Sub-Division.			Ballot Papers sent out, and How Disposed of in each Sub-Division.							Tendered Ballot Papers sent out and how disposed of in each Sub-Division.			Population in each Constituency, as shewn by last Census.
					Total No. of Votes Polled.	No. of Votes remaining Unpolled.	No. of Names on the Voters' Lists.	No. of Ballot Papers sent out to each Sub-Division.	Used Ballot Papers.	Unused Ballot Papers.	Rejected Ballot Papers.	Spoiled Ballot Papers.	Ballot Papers given to Voters who afterwards declined to Vote.	Ballot Papers taken from Polling Places.	No. of Tendered Ballots sent out to each Sub-division.	Used.	Unused.	
		Rorke.	Brown.	McCol-man.														
Grey, C. R.	Artemesia.....No. 1	33	80	6	119	102	221	273	119	151	....	3	... ..	.....	25	1	24	
	do ..... " 2	103	57	3	163	98	261	322	163	158	1	....	....	.....	25	1	24	
	do ..... " 3	91	38	7	136	58	194	238	136	102	....	....	.....	.....	25	.. ...	25	
	do ..... " 4	64	33	6	103	128	231	285	103	181	....	1	.....	.....	25	.....	25	4576
	do ..... " 5	347— 56	233— 25	26— 4	85	53	138	169	85	84	....	....	.....	.....	25	6	19	
	Collingwood..... " 1	.. 1	23		24	18	42	52	24	28	....	....	.....	.....	10	.....	10	
	do ..... " 2	2	4	13	19	88	107	132	19	113	....	....	.....	.....	15	.....	15	
	do ..... " 3	2	6	7	15	23	38	47	15	32	....	....	.....	.....	10	.....	10	
	do ..... " 4	3	20	9	32	50	82	101	32	69	....	....	.....	.....	10	....	10	
	do ..... " 5	11	15	30	56	27	83	102	56	46	....	....	.....	.....	10	.....	10	
	do ..... " 6	15	68	17	100	39	129	172	100	72	....	....	.....	.....	20	.....	20	4915
	do ..... " 7	19	40	57	116	48	164	202	116	85	1	....	.....	.....	20	1	19	
	do ..... " 8	38	33	39	110	34	144	178	110	68	....	....	.....	.....	20	.....	20	
	do ..... " 9	54	75	16	145	49	194	240	145	93	....	2	.....	.....	20	.....	20	
	do ..... " 10	184— 40	311— 49	273— 62	151	77	228	282	151	130	1	....	....	.....	20	.....	20	
	Euphrasia..... " 1	24	6	16	46	26	72	89	46	43	....	....	.....	.....	15	.....	15	
	do ..... " 2	36	31	16	83	63	146	180	83	96	1	....	.....	.....	20	.....	20	
	do ..... " 3	62	34	13	109	54	163	201	109	92	....	....	.....	.....	20	1	19	
	do ..... " 4	37	16	42	95	74	169	209	95	113	....	....	1	.....	20	1	19	3688
	do ..... " 5	43	21	8	72	70	142	174	72	101	....	1	.....	.....	15	.....	15	
	do ..... " 6	35	10	1	46	40	86	107	46	61	....	....	.....	.....	15	.....	15	
	do ..... " 7	259 - 22	134— 16	97— 1	39	52	91	113	39	74	....	....	.....	.....	15	. ...	15	
	Holland..... " 1	35	76	4	115	77	192	237	115	122	....	....	.....	.....	20	1	19	
	do ..... " 2	46	56	12	114	87	201	248	114	130	4	....	.....	.....	20	.....	20	
	do ..... " 3	77	39	2	118	67	185	229	118	106	5	....	.....	.....	20	.....	20	
	do ..... " 4	20	58	1	79	76	155	192	79	113	....	....	.....	.....	20	.....	20	3688
	do ..... " 5	244— 66	260 31	21— 2	99	43	142	175	99	75	....	1	.....	.....	20	.....	20	

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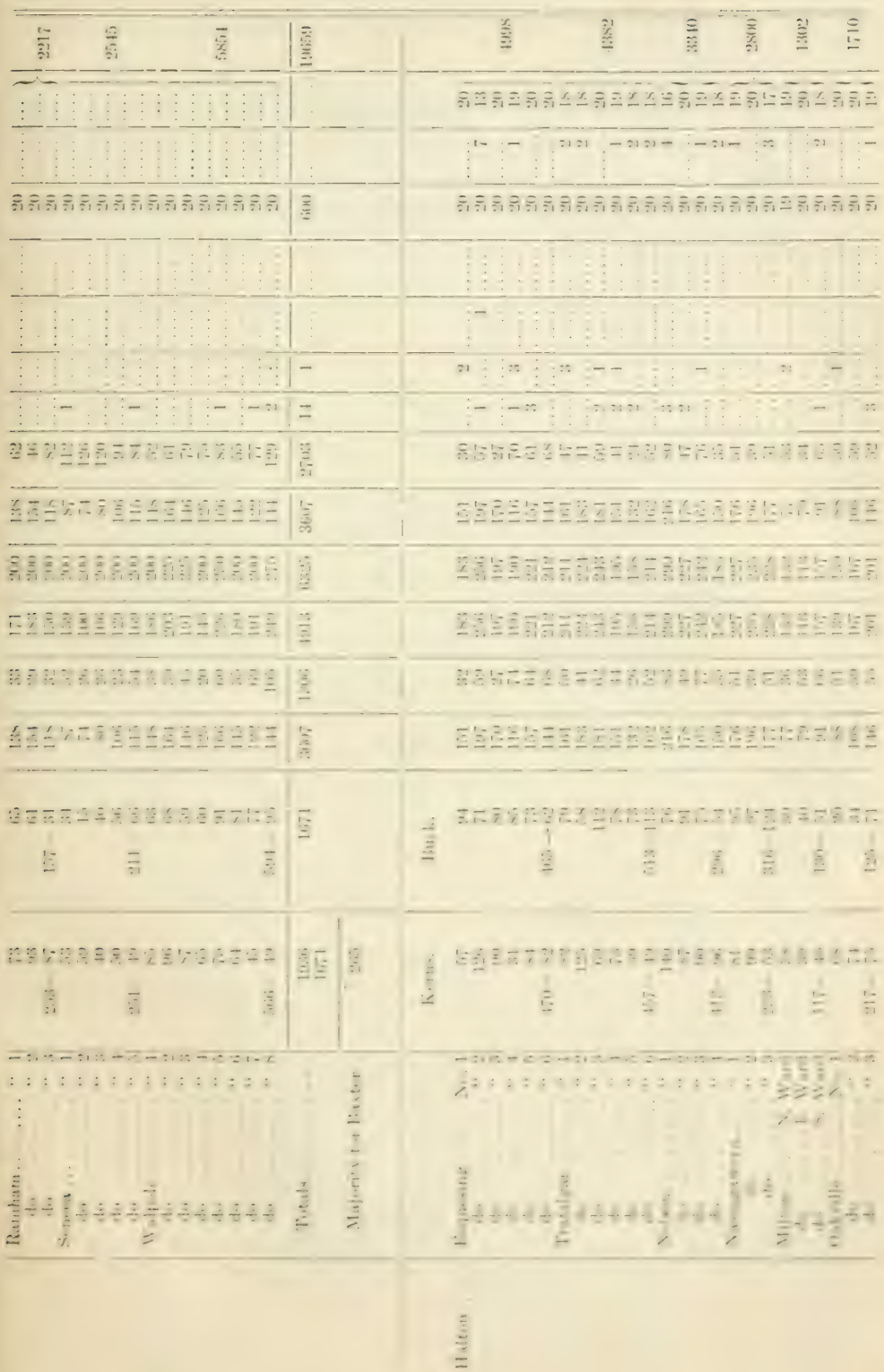
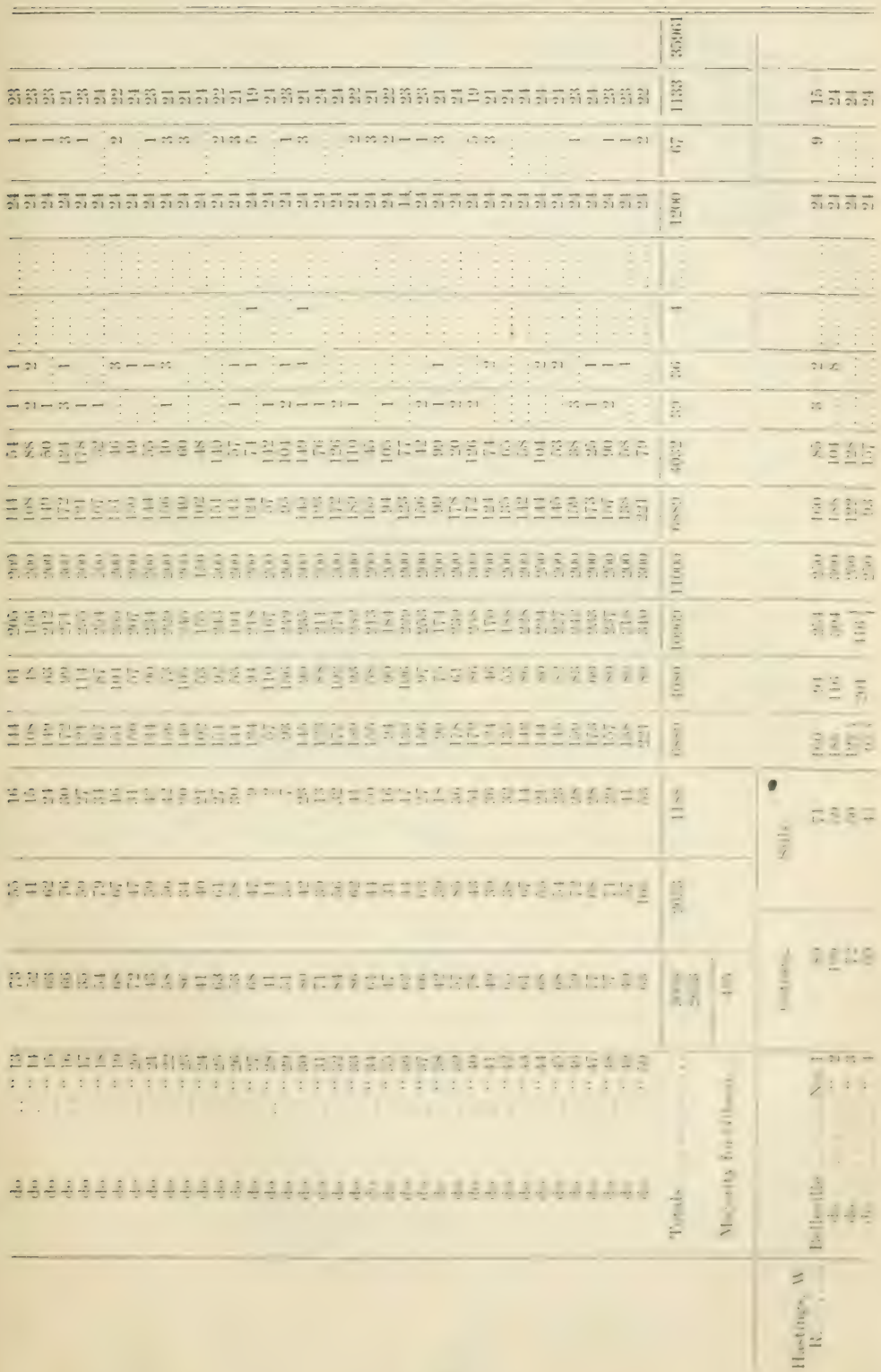
RETURN from the Records of the General Election to the Legislative Assembly in 1886, etc.—*Continued.*

Electoral District.	Names and Numbers of Polling Sub-Divisions.	Names of Candidates and No. of Votes Polled for Each.		Voters in each Sub-Division.			Ballot Papers sent out and how Disposed of in each Sub-Division.							Tendered Ballot Papers sent out and how disposed of in each Sub-Division.			Population in each Constituency, as shewn by last Census.
				Total No. of Votes Polled.	No. of Votes remaining Unpolled.	No. of Names on the Voters' List.	No. of Ballot Papers sent out to each Sub-Division.	Used Ballot Papers.	Unused Ballot Papers.	Rejected Ballot Papers.	Spoiled Ballot Papers.	Ballot Papers given to Voters who afterwards declined to Vote.	Ballot Papers taken from Polling Places.	No. of Tendered Ballots sent out to each Sub-Division.	Used.	Unused.	
		Blyth.	Irvin.														
Grey, S. R.—*Continued.*	Proton ..... No. 5	70	48	118	62	180	210	118	92	....	....	.....	.....	20	3	17	
	do ..... " 6	18	69	87	57	144	195	87	107	1	....	.....	.....	20	.....	20	3402
	do ..... " 7	281— 37	308— 15	52	30	82	110	52	58	....	....	.....	.....	20	.....	20	
	Town of Durham.....	144 144	70— 70	214	72	286	305	214	86	2	3	.....	.....	20	.....	20	1059
	Totals	2087 1834	1834	3921	1599	5509	6204	3921	2235	27	21	.....	.....	661	10	651	24529
	Majority for Blyth ...	253															
		Baxter.	Martin.														
Haldimand..	Caledonia	65— 65	108—108	173	76	249	275	173	100	2	....	.....	.....	20	.....	.....	1242
	Cayuga	107—107	51— 51	158	45	203	225	158	67	....	....	.....	.....	20	.....	.....	830
	North Cayuga... No. 1	88	20	108	22	130	200	108	92	....	....	.....	.....	20	.....	..	
	do .... " 2	45	20	65	25	90	200	65	134	1	....	.....	.....	20	.....	.....	
	do .... " 3	96	39	135	69	204	200	135	65	....	....	.....	....	20	.....	....	2109
	do .... " 4	275 - 46	135— 56	102	32	134	200	102	96	2	....	.....	...	20	.....	....	
	S. Cayuga..... " 1	113—113	67— 67	180	61	241	250	180	69	1	....	.....	.....	20	.....	.....	959
	Dunn .... " 1	31	91	122	47	169	200	122	78	....	....	.....	.....	20	.....	....	
	do " 2	62— 31	145— 54	85	45	130	200	85	115	....	....	.....	.....	20	.....	....	1040
	Oneida..... " 1	92	32	124	30	154	200	124	76	....	....	.....	.....	20	.....	....	
	do ..... " 2	33	94	127	84	211	200	127	71	2	....	.....	.....	20	.....	....	
	do ..... " 3	51	29	80	16	96	200	80	120	....	....	.....	.....	20	.....	....	
	do ..... " 4	36	32	68	52	120	200	68	131	....	1	.....	.....	20	.....	....	2863
	do .... " 5	244— 32	203— 16	48	16	64	200	48	152	....	....	.....	....	20	.....	....	



RETURN from the Records of the General Election to the Legislative Assembly in 1886, etc.—*Continued.*

Electoral District.	Names and Numbers of Polling Sub-Divisions.	Names of Candidates and No. of Votes Polled for Each.			Voters in each Sub-Division.			Ballot Papers sent out, and how Disposed of in each Sub-Division.							Tendered Ballot Papers sent out and how disposd of in each Sub-Division.			Population in each Constituency, as shewn by last Census.
					Total No. of Votes Polled.	No. of Votes remaining Unpolled.	No. of names on the Voters' Lists.	No. of Ballot Papers sent out to each Sub-Division.	Used Ballot Papers.	Unused Ballot Papers.	Rejected Ballot Papers.	Spoiled Ballot Papers.	Ballot Papers given to Voters who afterwards declined to Vote.	Ballot Papers taken from Polling Places.	No. of Tendered Ballots sent out to each Sub-Division.	Used.	Unused.	
		Kerns.	Buck.															
Halton—*Con.*	Georgetown.....No. 1	56	65		121	42	163	163	121	38	4	....	.....	.....	20	8	12	1471
	do ..... " 2	122— 66	146— 81		147	58	205	205	147	56	2	....	.....	.....	20	2	18	
	Acton..... " 1	59	30		89	50	139	139	89	49	1	...	.....	.....	20	1	19	848
	do ..... " 2	98— 39	74— 44		83	54	137	137	83	54	....	....	.....	.....	20	2	18	
	Burlington..... " 1	79	49		128	56	184	184	128	56	....	....	.....	.....	20	.....	20	
	do ..... " 2	150— 71	90 41		112	61	173	173	112	60	....	1	....	.....	20	.....	20	1068
	Totals.....	2277 2155	2155		4432	1625	6057	6057	4432	1582	27	15	1	.....	619	44	575	21919
	Majority for Kerns...	122																
		Gibson.	Burns.	Racey.														
City of Hamilton.	City of Hamilton..No. 1	69	45	1	115	74	189	200	115	83	....	2	.....	.....	24	.....	24	
	do .. " 2	64	49	6	119	52	171	200	119	80	1	....	.....	.....	24	2	22	
	do .. " 3	41	51	14	196	57	163	200	106	94	....	....	.....	.....	24	.....	24	
	do .. " 4	75	23	29	127	42	169	200	127	73	....	....	.....	.....	24	1	23	
	do .. " 5	74	32	43	149	74	223	250	149	99	1	1	.....	.....	24	1	23	
	do .. " 6	71	46	16	133	81	214	200	133	67	....	....	.....	.....	24	1	23	
	do .. " 7	42	34	2	78	137	215	200	78	121	....	....	1	.....	24	2	22	
	do .. " 8	45	49	8	102	125	227	200	102	97	1	....	.....	.....	24	1	23	
	do .. " 9	68	82	19	169	124	293	300	169	128	1	1	1	.....	24	3	21	
	do .. " 10	60	46	7	113	59	172	200	113	86	1	....	.....	.....	24	.....	24	
	do .. " 11	43	53	6	102	48	150	200	102	98	....	....	.....	.....	24	.....	24	
	do .. " 12	88	59	15	162	63	225	200	162	37	1	....	.....	.....	24	1	23	



RETURN from the Records of the General Election to the Legislative Assembly in 1886, etc.—*Continued.*

Electoral District.	Names and Numbers of Polling Sub-Divisions.	Names of Candidates and No. of Votes Polled for Each.		Voters in each Sub-Division.			Ballot Papers sent out, and how Disposed of in each Sub-Division.							Tendered Ballot Papers sent out and how disposed of in each Sub-Division.			Population in each Constituency, as shewn by last Census.
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		Ostram.	Sills.														
Hastings, W. R. —*Con.*	Belleville.....No. 5	55	59	114	200	442	250	114	136	1	1	.....	.....	24	21	3	
	do ..... " 6	74	54	128			250	128	119	3	....	.....	.....	24	.....	24	
	do ..... " 7	53	42	95	177	364	300	95	205	....	....	.....	.....	24	.....	24	
	do ..... " 8	56	36	92			300	92	206	....	2	.....	.....	24	5	19	9516
	do ..... " 9	51	73	124	113	392	300	124	175	1	....	.....	.....	24	2	22	
	do ..... " 10	45	110	155			325	155	164	3	3	.....	.....	24	3	21	
	do ..... " 11	85	57	142	151	434	300	142	158	....	....	.....	.....	24	1	23	
	do ..... " 12	73	68	141			300	141	151	6	2	.....	.....	24	.....	24	
	do ..... " 13	887 55	781—62	117	74	191	200	117	83	....	....	.....	.....	24	4	20	
	Trenton..... .. " 1	48	40	88	39	127	150	88	61	1	....	.....	.....	24	6	18	
	do ..... " 2	44	34	78	53	131	150	78	69	2	....	1	.....	24	5	19	
	do ..... " 3	48	31	79	49	128	150	79	70	....	1	.....	....	24	10	14	3042
	do ..... " 4	75	43	118	87	205	225	118	107	....	....	.....	.....	24	4	20	
	do ..... " 5	68	61	129	79	208	225	129	90	3	3	.....	.....	24	7	17	
	do ..... " 6	335—52	244—35	87	46	133	150	87	61	....	2	.....	.....	24	10	14	
	Sidney ..... " 1	70	101	171	42	213	225	171	53	....	1	.....	.....	24	8	16	
	do ..... " 2	68	60	128	32	160	175	128	47	....	....	.....	.....	24	.....	24	
	do ..... " 3	77	105	182	40	222	225	182	43	....	....	.....	.....	24	1	23	4842
	do ..... " 4	86	116	202	91	293	300	202	95	2	1	.....	.....	24	3	21	
	do ..... " 5	100	94	194	69	263	275	194	79	....	2	.....	.....	24	3	21	
	do .... " 6	459—58	534—58	116	45	161	175	116	59	....	....	.....	.....	24	6	18	
	Totals.....	1681 1562	1562	3243	1798	5041	6000	3243	2703	25	28	1	.....	600	108	492	17400
	Majority for Ostram..	119															

RETURN from the Records of the General Election to the Legislative Assembly in 1886, etc.—*Continued.*

Electoral District.	Names and Numbers of Polling Sub-Divisions.	Names of Candidates and No. of Votes Polled for Each.		Voters in each Sub-Division.			Ballot Papers sent out, and how Disposed of in each Sub-Division.							Tendered Ballot Papers sent out and how disposed of in each Sub-Division.			Population in each Constituency, as shewn by last Census.
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		Wood.	Faulkner.														
Hastings, N. R. *Con...*																	
	Rawdon .....No. 4	43	59	102	55	157	152	104	46	2	....	.....	.....	18	1	17	
	do ..... " 5	80	24	104	58	162	180	104	75	....	1	.....	.....	18	1	17	
	do ..... " 6	326 – 66	319 – 29	95	61	156	149	95	54	.....	.....	.....	.....	18	.....	18	
	Village of Stirling	64 – 64	88 – 88	152	85	237	330	152	176	1	1	.....	.....	18	2	16	874
	Tudor, Limerick and Cashel.....No. 1	43	22	65	48	113	196	65	131	.....	.....	.....	.....	18	1	17	1127
	do ..... " 2	111 – 68	66 – 44	112	86	198	180	112	68	.....	.....	.....	.....	18	.....	18	
	Mayo and Carlow. " 1	25	18	43	30	73	199	43	156	.....	.....	.....	.....	18	.....	18	935
	do ..... " 2	35 – 10	24 – 6	16	14	30	33	16	17	.....	.....	.....	.....	18	.....	18	
	Dungannon & Faraday ..... " 1	60	27	87	82	169	180	87	93	.....	.....	.....	.....	18	2	16	
	do ..... " 2	42	12	54	40	94	111	54	56	.....	1	.....	.....	18	.....	18	423
	do ..... " 3	121 – 19	40 – 1	20	13	33	68	20	48	.....	.....	.....	.....	18	.....	18	
	Bangor, McClure, etc..... " 1	9	10	19	30	49	179	19	160	.....	.....	.....	.....	18	.....	18	
	do ..... " 2	25 – 16	10 – ..	16	19	35	177	16	161	.....	.....	.....	.....	18	.....	18	855
	Monteagle and Herschell ..... " 1	41	43	84	84	168	265	84	179	.....	2	.....	.....	18	.....	18	
	do ..... " 2	56 – 15	53 – 10	25	69	94	77	25	52	.....	.....	.....	.....	18	.....	18	1072
	Wollaston..... " 1	71 – 71	19 – 19	90	100	190	215	90	122	3	.....	.....	.....	18	1	17	970
	Totals.....	1863 1100	1100	2963	1647	4610	5886	2968	2899	8	10	1	.. ..	579	29	550	20348
	Majority for Wood...	763															

| | | |

RETURN from the Records of the General Election to the Legislative Assembly in 1886, etc.—*Continued.*

Electoral District.	Names and Numbers of Polling Sub-Division.	Names of Candidates and No. of Votes Polled for each.		Voters in each Sub-Division.			Ballot Papers sent out, and how disposed of in each Sub-Division.							Tendered Ballot Papers sent out and how disposed of in each Sub-Division.			Population in each Constituency, as shewn by last Census.
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		Bishop.	Swenerton.														
Huron, S.R.	Tuckersmith.....No. 1	75	25	100	90	190	200	100	98	1	1	.....	.....	20	.....	20	
	do ..... " 2	98	22	120	80	200	200	120	79	1	.....	.....	.....	20	.....	20	
	do ..... " 3	111	18	129	63	192	200	129	66	4	1	.....	.....	20	.....	20	3550
	do ..... " 4	381— 97	90— 25	122	78	200	200	122	76	1	1	.....	.....	20	1	19	
	Usborne ..... " 1	43	112	155	65	220	200	155	45	.....	.....	.....	.....	20	.....	20	
	do ..... " 2	102	41	143	43	186	200	143	55	.....	2	.....	.....	20	.....	20	
	do ..... " 3	59	100	159	41	200	200	159	40	1	.....	.....	.....	20	.....	20	3074
	do ..... " 4	280— 76	307 —54	130	36	166	200	130	70	.....	.....	.....	.....	20	.....	20	
	Stephen ..... " 1	49	68	117	69	186	200	117	81	.....	2	.....	.....	20	.....	20	
	do ..... " 2	73	63	136	44	180	200	136	63	.....	1	.....	.....	20	1	19	
	do ..... " 3	102	49	151	39	190	200	151	46	3	.....	.....	.....	20	.....	20	
	do ..... " 4	73	33	106	65	171	200	106	94	.....	.....	.....	.....	20	1	19	4504
	do ..... " 5	75	27	102	78	180	200	102	97	.....	1	.....	.....	20	.....	20	
	do ..... " 6	35	42	77	41	118	200	77	122	.....	1	.....	.....	20	.....	20	
	do ..... " 7	477— 70	322— 40	110	30	140	200	110	89	.....	1	.....	.....	20	.....	20	
	Hay ..... " 1	55	28	83	40	123	200	83	115	.....	2	.....	.....	20	.....	20	
	do ..... " 2	81	60	141	39	180	200	141	59	.....	.....	.....	.....	20	.....	20	
	do ..... " 3	108	23	131	44	175	200	131	68	1	.....	.....	.....	20	1	19	
	do ..... " 4	40	4	44	46	90	200	44	153	3	.....	.....	.....	20	.....	20	4421
	do ..... " 5	86	14	100	66	166	200	100	96	4	.....	.....	.....	20	1	19	
	do ..... " 6	67	35	102	45	147	200	102	97	1	.....	.....	.....	20	1	19	
	do ..... " 7	467— 30	186— 22	52	19	71	200	52	146	2	.....	.....	.....	20	.....	20	
	Stanley ..... " 1	69	22	91	46	137	200	91	109	.....	.....	.....	.....	20	1	19	
	do ..... " 2	65	40	105	20	125	200	105	93	.....	2	.....	.....	20	.....	20	
	do ..... " 3	37	115	152	18	170	200	152	48	.....	.....	.....	.....	20	.....	20	2940
	do ..... " 4	14	46	60	120	180	200	60	139	.....	1	.....	.....	20	.....	20	
	do ..... " 5	252— 67	255— 32	99	47	146	200	99	101	.....	.....	.....	.....	20	.....	20	

	Hurea, W. R.	Taylor.	Ross.
Gisborne Township			
do			
do			
do			
Ashfield			
do			
do			
do			
West Waimate			
do			
do			
do			
Lee			
do			
do			
do			
Gisborne			
do			
do			
do			
Totals			
Majority for Bishop.			

RETURN from the Records of the General Election to the Legislative Assembly in 1886, etc.—*Continued.*

Electoral District.	Names and Numbers of Polling Sub-Divisions.	Names of Candidates and No. of Votes Polled for Each.		Voters in each Sub-Division.			Ballot Papers sent out, and how Disposed of in each Sub-Division.							Tendered Ballot Papers sent out and how disposed of in each Sub-Division.			Population in each Constituency, as shewn by last Census.
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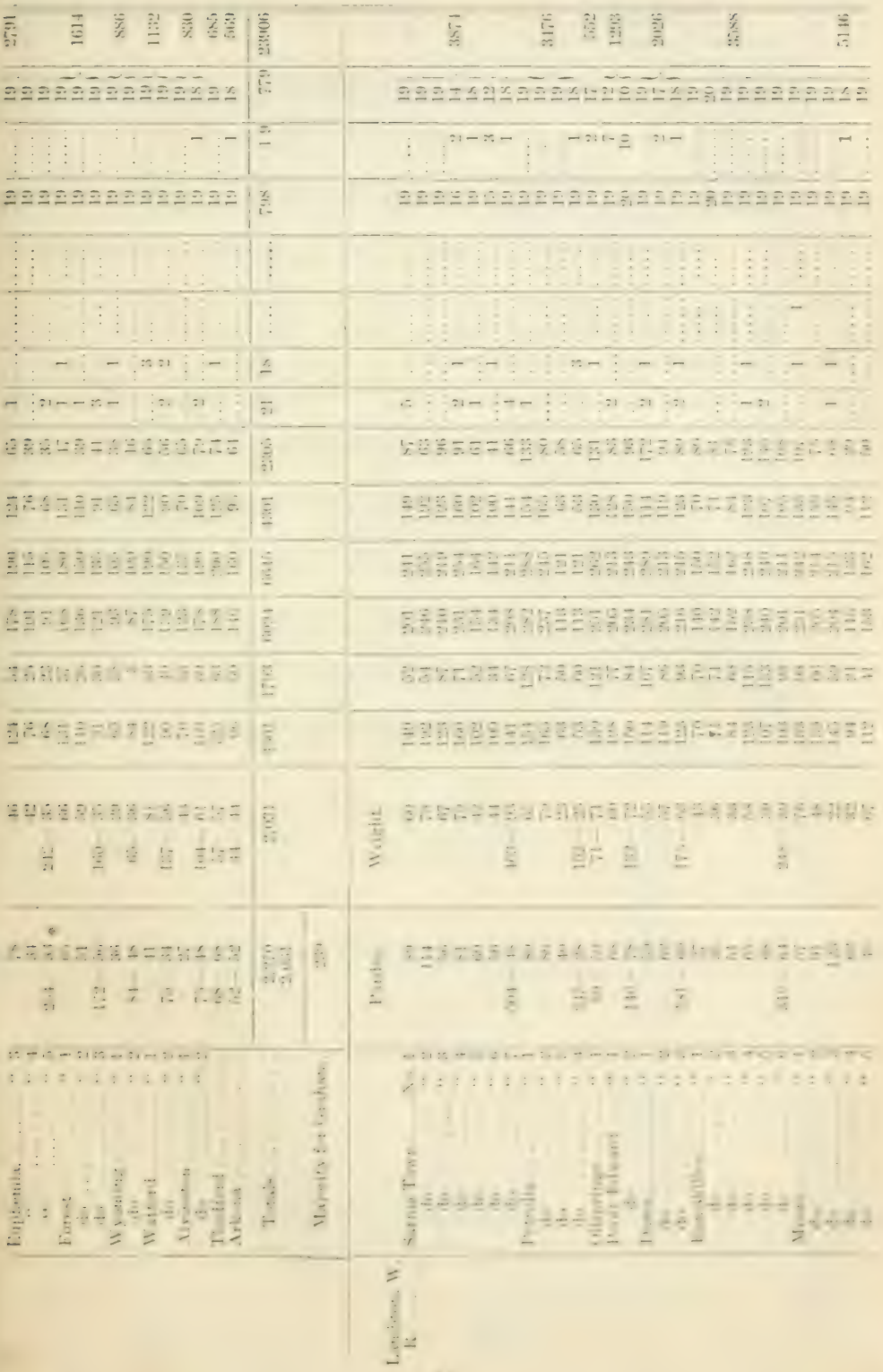
		Ross.	Taylor.														
Huron, W.R. —*Continued.*	Wingham .....No. 1	36	32	68	68	136	155	68	87	....	....	.....	.....	17	.....	17	1918
	do ..... " 2	33	35	68	62	130	155	68	87	....	....	.....	.....	17	1	16	
	do ..... " 3	40	46	86	54	140	165	86	79	....	....	.....	.....	17	.....	17	
	do ..... " 4	168— 59	158— 45	104	78	182	200	104	96	....	....	.....	.....	17	.....	17	
	Clinton ..... " 1	27	24	51	41	92	120	51	66	3	....	.....	.....	17	.....	17	2606
	do ..... " 2	44	23	67	35	102	120	67	52	1	....	.....	.....	17	.....	17	
	do ..... " 3	37	30	67	46	113	130	67	63	....	....	.....	.....	17	.....	17	
	do ..... " 4	41	37	78	24	102	125	78	47	....	....	.....	.....	17	.....	17	
	do ..... " 5	30	25	55	42	97	115	55	58	1	1	.....	.....	17	.....	17	
	do ..... " 6	29	33	62	39	101	125	62	59	3	1	.....	.....	17	.....	17	
	do ..... " 7	11	37	48	25	73	100	48	52	....	....	.....	.....	17	.....	17	
	do ..... " 8	260— 41	243— 34	75	32	107	140	75	65	....	....	.....	.....	17	.....	17	
	Hullett ..... " 5	32	36	68	25	93	115	68	47	....	....	.....	.....	17	.....	17	1100
	do ..... " 6	57	32	89	31	120	145	89	55	....	1	.....	.....	17	.....	17	
	do ..... " 7	152— 63	97— 29	92	28	120	145	92	52	....	1	.....	.....	17	.....	17	
	Blyth ..... " 1	35	53	88	45	132	155	88	66	....	1	.....	.....	17	.....	17	914
	do ..... " 2	72— 37	93— 40	77	46	123	140	77	63	....	....	.....	....	17	.....	17	
	Totals	2358	2021	4379	2024	6403	7370	4379	2953	22	16	.....	.....	800	11	789	25234
		2021															
	Maj. for A. M. Ross..	337															
		Ferguson.	Jackson.														
Kent, E. R..	Bothwell .....No. 1	39	30	69	45	114	150	69	81	....	....	.....	.....	20	.....	20	965
	do ..... " 2	33	30	63	51	114	150	63	87	....	....	.....	.....	20	.....	20	
	do ..... " 3	9	4	13	16	29	100	13	87	....	....	.....	.....	20	1	19	

RETURN from the Records of the General Election to the Legislative Assembly in 1886, etc.—*Continued.*

Election District.	Names and Numbers of Polling Sub-Division.	Names of Candidates and No. of Votes Polled for each.		Voters in each Sub-Divisionn.			Bbllot Papers sent out, and How Disposed of in each Sub-Division.							Tendered Ballot Papers sent out and how disposed of in each Sub-Division.			Population in each Constituency, as shewn by last Census.
				Total No. of Votes Polled.	No. of Votes remaining Unpolled.	No. of Names of the Voters' List.	No. of Ballot Papers sent out to each Sub-Division.	Used Ballot Papers.	Unused Ballot Papers.	Rejected Ballot Papers.	Spoiled Ballot Papers.	Ballot Papers given to Voters who afterwards declined to Vote.	Ballot Papers taken from Polling Places.	No. of Tendered Ballots sent out to each Sub-division.	Used.	Unused.	
		Clancy.	Dillon.														
Kent, W. R. —*Continued.*	Town of Chatham No. 4	86	39	125	146	271	271	125	144	2	....	....	....	20	....	20	
	do " 5	54	37	91	119	210	210	91	119	....	....	....	....	20	....	20	
	do " 6	35	49	84	130	214	214	84	129	1	....	....	....	20	....	20	
	do " 7	45	29	74	123	197	197	74	123	....	....	....	....	20	....	20	
	do " 8	30	23	53	92	145	145	53	91	....	1	....	....	20	....	20	
	do " 9	37	44	81	96	177	177	81	94	2	....	....	....	20	2	18	7873
	do " 10	41	66	107	108	215	215	107	108	....	....	....	....	20	1	19	
	do " 11	45	46	91	108	199	199	91	107	1	....	....	....	20	1	19	
	do " 12	49	61	110	116	226	227	110	115	1	1	....	....	20	....	20	
	do " 13	31	43	74	90	164	164	74	89	1	....	....	....	20	1	19	
	do " 14	644— 35	596— 21	56	64	120	120	56	64	....	....	....	....	20	....	20	
	Tp. of Chatham " 1	45	74	119	78	197	197	119	74	....	4	....	....	20	1	19	
	do " 2	81	38	119	37	156	156	119	37	....	....	....	....	20	....	20	
	do " 3	43	74	117	88	205	205	117	85	....	3	....	....	20	....	20	
	do " 4	63	37	100	69	169	169	100	67	1	1	....	....	20	....	20	
	do " 5	49	27	76	44	120	120	76	44	....	....	....	....	19	5	14	5907
	do " 6	55	18	73	38	111	111	73	38	....	....	....	....	20	....	20	
	do " 7	47	22	69	51	120	120	169	50	....	1	....	....	20	....	20	
	do " 8	84	30	114	99	213	214	114	96	4	....	....	....	20	....	20	
	do " 9	513— 46	346— 26	72	35	107	107	72	34	1	....	....	....	20	2	18	
	Dover ..... " 1	70	71	141	56	197	197	141	55	1	....	....	....	20	....	20	
	do ..... " 2	100	95	195	59	254	254	195	57	2	....	....	....	19	....	19	4447
	do ..... " 3	77	60	137	68	205	194	137	55	2	....	....	....	19	3	16	
	do ..... " 4	318— 71	320 - 94	165	85	250	250	165	83	....	2	....	....	19	....	19	
	Raleigh ..... " 1	64	59	123	34	157	156	123	32	1	....	....	....	20	11	9	
	do ..... " 2	39	31	70	39	109	109	70	36	3	....	....	....	21	1	20	
	do ..... " 3	55	40	95	48	143	143	95	46	2	....	....	....	20	1	19	
	do ..... " 4	36	78	114	40	154	154	114	37	3	....	....	....	19	....	19	
	do ..... " 5	43	47	90	39	129	129	90	36	3	....	....	....	19	1	18	

RETURN from the Records of the General Election to the Legislative Assembly in 1886, etc.—*Continued.*

Election District.	Names and Numbers of Polling Sub-Division.	Names of Candidates and No. of Votes Polled for each.		Voters in each Sub-Division.			Ballot Papers sent out, and how disposed of in each Sub-Division.							Tendered Ballot Papers sent out and how disposed of in each Sub-Division.			Population in each Constituency, as shewn by last Census.
				Total No. of Votes Polled.	No. of Votes remaining Unpolled.	No. of Names on the Voters' Lists.	No. of Ballot Papers sent out to each Sub-Division.	Used Ballot Papers.	Unused Ballot Papers.	Rejected Ballot Papers.	Spoiled Ballot Papers.	Ballot Papers given to Voters who afterwards declined to Vote.	Ballot Papers taken from Polling Places.	No. of Tendered Ballots sent out to each Sub-division.	Used.	Unused.	
		Graham.	Stanley.														
Lambton, E. R.....	Bosanquet .....No. 1	79	36	115	48	163	175	115	60	....	....	.....	.....	19	.....	19	
	do ..... " 3	50	87	137	62	199	210	137	69	2	2	.....	.....	19	.....	19	
	do ..... " 3	47	40	87	29	116	125	87	36	1	1	.....	.....	19	.....	19	3360
	do ..... " 4	32	31	63	47	110	120	63	56	....	1	.....	.....	19	.....	19	
	do ..... " 5	50	22	72	54	126	140	72	68	....	....	....	....	19	.....	19	
	do ..... " 6	296— 38	229— 13	51	40	91	105	51	54	....	....	.....	.....	19	.....	19	
	Plympton ..... " 1	51	29	80	36	116	130	80	50	....	....	.....	.....	19	.....	19	
	do ..... " 2	76	37	113	37	150	165	113	52	....	....	.....	.....	19	.....	19	
	do ..... " 3	53	27	80	40	120	135	80	55	....	....	.....	.....	19	2	17	
	do ..... " 4	91	55	146	36	182	200	146	54	....	....	.....	.....	19	.....	19	
	do ..... " 5	108	47	155	40	195	210	155	55	....	....	.....	.....	19	1	18	4495
	do ..... " 5	26	20	46	10	56	65	46	19	....	....	.....	.....	19	1	18	
	do ..... " 7	53	32	85	46	131	145	85	60	....	....	.....	.....	19	1	18	
	do ..... " 8	484— 26	275— 28	54	26	80	90	54	36	....	....	.....	.....	19	2	17	
	Warwick ..... " 1	60	68	128	32	160	175	128	45	1	1	.....	.....	19	2	17	
	do ..... " 2	39	76	115	26	141	155	115	40	....	....	.....	.....	19	1	18	
	do ..... " 3	68	93	161	37	198	210	161	46	3	....	.....	.....	19	2	17	
	do ..... " 4	64	42	106	48	154	165	106	59	....	....	.....	.....	19	.....	19	4052
	do ..... " 5	83	20	103	31	134	145	103	42	....	....	.....	.....	19	....	19	
	do ..... " 6	51	16	67	45	112	125	67	58	....	....	.....	.....	19	1	18	
	do ..... " 7	408— 43	383— 68	111	32	143	155	111	44	....	....	.....	.....	19	.....	19	
	Brooke..... " 1	58	34	92	67	159	170	92	78	....	....	.....	.....	19	1	18	
	do ..... " 2	45	66	111	96	207	220	111	108	....	1	.....	.....	19	1	18	
	do ..... " 3	87	47	134	59	193	210	134	75	1	....	.....	.....	19	.....	19	3492
	do ..... " 4	52	86	138	55	193	210	138	72	....	....	.....	.....	19	2	17	
	do ..... " 5	302— 60	335 -102	162	31	193	210	162	47	....	1	.....	.....	19	.....	19	
	Euphemia..... " 1	73	66	139	62	201	215	139	76	....	....	.....	.....	19	.....	19	
	" ..... " 2	36	53	89	58	147	160	89	68	....	3	.....	.....	19	.....	19	



RETURN from the Records of the General Election to the Legislative Assembly in 1886, etc.—*Continued.*

Electoral District.	Names and Numbers of Polling Sub-Divisions.	Names of Candidates and No. of Votes Polled for each.		Voters in each Sub-Division.			Ballot Papers sent out, and how disposed of in each Sub-Division.							Tendered Ballot Papers sent out and how disposed of in each Sub-Division.			Population in each Constituency, as shewn by last Census.
				Total No. of Votes Polled.	No. of Votes remaining Unpolled.	No. of Names on the Voters' Lists.	No. of Ballot Papers sent out to each Sub-Division.	Used Ballot Papers.	Unused Ballot Papers.	Rejected Ballot Papers.	Spoiled Ballot Papers.	Ballot Papers given to Voters who afterwards declined to vote.	Ballot Papers taken from Polling Places.	No. of Tendered Ballots sent out to each Sub-Division.	Used.	Unused.	
		Pardee.	Wright.														
Lambton, W. R.—*Con.*	Moore ..... " 6	80	74	154	69	223	232	154	76	2	....	.....	.....	19	2	17	
	do ..... " 7	66	41	107	36	143	151	107	43	....	1	.....	.....	20	.....	20	
	do ..... " 8	558— 34	383— 23	57	15	72	80	97	21	1	1	.....	.....	19	1	18	
	Sarnia Township.. " 1	68	37	105	64	169	179	105	73	....	1	.....	.....	19	.....	19	
	do .. " 2	44	43	87	26	113	121	87	34	....	....	.....	.....	19	3	16	3583
	do .. " 3	42	52	94	46	140	148	94	52	....	2	.....	....	20	1	19	
	do .. " 4	205— 51	189— 57	108	76	184	192	108	84	....	....	.....	.....	19	.....	19	
	Sombra ..... " 1	72	27	99	83	182	192	99	93	....	....	.....	.....	19	.....	19	
	do ..... " 2	65	76	141	86	227	237	141	96	....	....	.....	....	19	.....	19	
	do ..... " 3	78	26	104	73	177	185	104	81	....	....	.....	....	19	.....	19	4601
	do ..... " 4	55	49	104	84	188	196	104	91	....	1	.....	.....	19	.....	19	
	do ..... " 5	54	33	87	48	135	142	87	54	1	....	.....	...	19	1	18	
	do ..... " 6	335— 11	236— 25	36	73	109	116	36	80	....	....	.....	.....	19	.....	19	
	Totals	2541	2089	4630	2974	7604	7995	4630	3320	27	17	1	.....	776	39	737	28139
		2089															
	Majority for Pardee..	452															
		Hilliard.	Donald.														
Lanark, N.R.	Lavour	49 - 49	14— 14	63	54	117	200	63	136	....	1	.....	.....	25	.....	25	767
	Darling	66— 66	22— 22	88	62	150	200	88	111	....	1	.....	.....	25	.....	25	
	Village Lanark.....	87— 87	40— 40	127	42	169	200	127	70	....	3	.....	.....	25	3	22	752
	Township Lanark. No. 1	80	19	99	28	127	200	99	100	....	1	.....	...	25	.....	25	
	do " 2	137	28	165	41	206	200	165	35	....	....	... .	.....	25	2	23	2029
	do " 3	262— 45	95— 48	93	23	116	200	93	107	....	....	.....	.....	25	.....	25	
	Ramsay ..... " 1	47	38	85	39	124	200	85	115	....	....	.....	.....	25	.....	25	
	do ..... " 2	39	59	98	24	122	200	98	101	1	....	...	.....	25	.....	25	2899
	do ..... " 3	69	69	138	54	192	250	138	110	2	....	.....	.....	25	.....	25	
	do ..... " 4	214- - 59	217— 51	110	63	173	200	110	89	....	1	.....	.....	25	.....	25	

RETURN from the Records of the General Election to the Legislative Assembly in 1886, etc.—*Continued.*

Electoral District.	Names and Numbers of Polling Sub-Divisions.	Names of Candidates and No. of Votes Polled for Each.		Voters in each Sub-Division.			Ballot Papers sent out, and how Disposed of in each Sub-Division.							Tendered Ballot Papers sent out and how disposed of in each Sub-Division.			Population in each Constituency, as shewn by last Census.
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		Preston.	Fredenburgh.														
Leeds	Gananobue ..... No. 1	90	71	161	60	221	242	161	81	....	....	.....	.....	23	6	17	2871
	do ..... " 2	66	66	132	48	180	259	132	127	....	....	.....	.....	23	.....	.....	
	do ..... " 3	95	55	150	47	197	286	150	136	....	....	.....	.....	23	1	22	
	do ..... " 4	335— 84	243— 51	135	37	172	256	135	118	2	1	.....	.....	23	2	21	
	Front of Leeds and Lansdowne..... No. 1	78	27	105	60	165	200	105	94	....	1	.....	.....	23	.....	.....	3587
	do " 2	60	31	91	104	195	266	91	174	1	....	.....	.....	23	.....	.....	
	do " 3	54	78	132	49	181	184	132	48	3	1	.....	.....	23	.....	.....	
	do " 4	108	31	139	48	187	255	139	115	1	....	.....	.....	23	.....	.....	
	do " 5	378 - 78	228 — 61	139	53	192	283	139	142	2	....	.....	.....	23	.....	.....	
	Rear of Leeds and Lansdowne ..... No. 1	79	63	142	44	186	226	142	83	....	1	.....	.....	23	.....	.....	2653
	do " 2	47	24	71	67	138	249	71	178	....	....	.....	.....	22	.....	.....	
	do " 3	87	49	136	51	187	249	136	112	....	1	.....	.....	23	.....	.....	
	do " 4	277— 64	162— 26	90	32	122	227	90	133	3	1	.....	.....	22	.....	.....	
	South Crosby .... " 1	66	47	113	51	164	254	113	140	1	....	.....	.....	23	.....	.....	1968
	do .... " 2	52	78	130	62	192	210	130	80	....	....	.....	.....	22	.....	.....	
	do .... " 3	166 - 48	138 - 13	61	32	93	155	61	93	....	1	.....	.....	23	.....	.....	
	North Crosby .... " 1	64	60	124	24	148	236	124	112	....	....	.....	.....	23	.....	.....	1999
	do .... " 2	21	127	148	26	174	148	148	.....	....	....	.....	.....	23	.....	.....	
	do .... " 3	127— 42	243 — 56	98	28	126	174	98	75	....	1	.....	.....	22	.....	.....	
	Newboro'.....	62— 62	23 — 23	85	27	112	226	85	141	....	....	.....	.....	22	.....	.....	418
	South Emsley .... No. 1	59	64	123	25	148	209	123	86	....	....	.....	.....	23	1	22	1121
	do .... " 2	84— 25	90— 26	51	30	81	142	51	91	....	....	.....	.....	23	.....	.....	
	Kitley ..... " 1	77	32	109	55	164	237	109	127	....	1	.....	.....	23	.....	.....	2593
	do ..... " 2	71	52	123	52	175	212	123	89	....	....	.....	.....	22	.....	.....	
	do ..... " 3	55	68	123	28	151	200	123	75	1	1	.....	.....	22	2	20	
	do .... " 4	283— 80	168 - 16	96	40	136	247	96	151	....	....	.....	.....	22	.....	.....	

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RETURN from the Records of the General Election to the Legislative Assembly in 1886, etc.—*Continued.*

Electorial District.	Names and Numbers of Polling Sub-Divisions.	Names of Candidates and No. of Votes Polled for each.		Voters in each Sub-Division.			Ballot Papers sent out, and how Disposed of in each Sub-Division.							Tendered Ballot Papers sent out and how disposed of in each Sub-Division.			Population in each Constituency, as shewn by last Census.
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Lincoln—*Continued.*		Garson.	Towers.														
	Grantham ..... No. 1	43	77	120	45	165	150	120	30	....	....	....	.....	20	.....	20	
	do .... " 2	34	60	94	52	146	200	94	106	....	....	.....	.....	20	.....	20	2218
	do .... " 3	37	61	98	65	163	200	98	102	....	....	.....	.....	20	.....	20	
	do .... " 4	147— 33	255— 57	90	67	157	200	90	108	1	1	.....	.....	20	.....	20	
	Louth..... " 1	55	57	112	43	155	200	112	87	....	1	.....	.....	20	6	14	
	do ..... " 2	37	41	78	51	129	200	78	122	....	....	.....	.....	20	1	19	1995
	do ..... " 3	133— 41	182— 84	125	67	192	200	125	74	....	1	.....	.....	20	.....	20	
	Clinton..... " 1	34	59	93	45	138	150	93	57	....	....	.....	.....	20	.....	20	
	do ..... " 2	63	47	110	71	181	200	110	88	1	1	.....	.....	20	1	19	
	do ..... " 3	41	35	76	27	103	150	76	74	...	...	.....	.....	20	1	19	2399
	do ..... " 4	164— 26	207— 66	92	59	151	200	92	107	...	1	.....	.....	20	.....	20	
	North Grimsby... " 1	55	49	104	125	229	250	104	145	....	1	.....	.....	20	.....	20	
	do .... " 2	87— 32	108— 59	91	42	133	150	91	59	...	...	.....	.....	20	.....	20	
	South Grimsby... " 1	93	51	144	55	199	250	144	103	....	3	.....	....	20	....	20	2416
	do .... " 2	177— 84	99— 48	132	54	186	200	132	67	1	....	.....	....	20	2	18	
	Port Dalhousie	86— 86	92— 92	178	63	241	200	178	21	1	...	.....	....	20	.....	20	1129
	Merriton	177—177	109—109	286	132	418	350	286	49	14	1	.....	.....	20	.....	20	1798
	Beamsville	99— 99	47— 47	146	65	211	300	146	153	....	1	.....	.....	20	.....	20	685
	Grimsby	51— 51	85— 85	136	48	184	250	136	114	....	....	.....	.....	20	.....	20	692
	City of St. Catharines—																
	St. Thoma's Ward..	162	103	265	190	455	399	265	130	2	1	1	.....	20	2	18	
	St. Andrew's " ..	121	117	238	203	441	300	238	59	2	1	.....	.....	40	3	37	
	St. George's " ..	138	133	271	208	479	400	271	127	1	1	.....	.....	40	1	39	9631
	St. Paul's " ..	171	138	309	213	522	400	309	86	3	2	.....	.....	40	1	39	
	St. Patrick's " ..	201	145	346	249	595	500	346	148	4	2	.....	.....	40	1	39	
	St. James' " ..	861— 68	749—113	181	131	312	200	181	16	3	...	.....	.....	20	1	19	
	Totals.....	2242 2227	2227	4469	2579	7048	7199	4469	2673	38	18	1	.....	700	22	678	26408
	Majority for Garson...	15															

RETURN from the Records of the General Election to the Legislative Assembly in 1886, etc.—*Continued.*

Electoral District.	Names and Numbers of Polling Sub-Divisions.	Names of Candidates and No. of Votes Polled for Each.		Voters in each Sub-Division.			Ballot Papers sent out, and how disposed of in each Sub-Division.							Tendered Ballot Papers sent out and how disposed of in each Sub-Division.			Population in each Constituency, as shewn by last Census.
				Total No. of Votes Polled.	No. of Votes remaining Unpolled.	No. of Names on the Voters' Lists.	No. of Ballot Papers sent out to each Sub-Division.	Used Ballot Papers.	Unused Ballot Papers.	Rejected Ballot Papers.	Spoiled Ballot Papers.	Ballot Papers given to Voters who afterwards declined to Vote.	Ballot Papers taken from Polling Places.	No. of Tendered Ballots sent out to each Sub-Division.	Used.	Unused.	
		Tooley.	Mackenzie.														
Middlesex, E. R.—*Con.*	London ..... " 1	38	50	88	55	143	150	88	58	2	2	.....	.....	16	.....	16	.....
	do ..... " 2	58	60	118	77	195	200	118	76	....	6	.....	.....	16	.....	16	.....
	do ..... " 3	95	36	131	27	158	200	131	69	....	....	.....	.....	16	.....	16	.....
	do ..... " 4	67	112	179	31	210	250	179	66	5	...	.....	.....	16	....	16	.....
	do ..... " 5	105	52	157	72	229	250	157	91	....	2	.....	.....	16	2	14	.....
	do ..... " 6	65	48	113	86	199	200	113	87	....	...	.....	.....	16	1	15	.....
	do ..... " 7	52	76	128	106	234	250	128	121	1	....	.....	.....	16	.....	16	.....
	do ..... " 8	72	38	110	120	230	250	110	137	3	.....	.....	.....	16	1	15	.....
	do ..... " 9	86	51	137	64	201	200	137	62	1	....	.....	.....	16	....	16	.....
	do ..... " 10	71	27	98	82	180	200	98	102	....	....	.....	.....	16	....	16	.....
	do ..... " 11	65	46	111	62	173	200	111	85	2	2	.....	.....	16	.....	16	.....
	do ..... " 12	113	29	142	63	205	250	142	108	...	....	.....	.....	16	.....	16	.....
	do ..... " 13	990—103	677—52	155	65	220	250	155	95	....	..	.....	.....	16	.....	16	.....
	London West..... " 1	45	48	93	50	143	150	93	57	....	.....	.....	.....	16	.....	16	.....
	do ..... " 2	49	70	119	49	168	200	119	79	2	..	.....	.....	16	....	16	.....
	do ..... " 3	137— 43	160— 42	85	53	138	150	85	65	....	....	.....	.....	16	.....	16	.....
	W. Nissouri..... " 1	64	35	99	16	115	150	99	47	....	4	.....	....	16	.....	16	.....
	do ..... " 2	84	41	125	23	148	150	125	25	....	....	.....	....	16	5	11	.....
	do ..... " 3	66	20	86	35	121	150	86	53	10	1	.....	.....	16	7	9	.....
	do ..... " 4	38	30	68	24	92	100	68	31	....	1	.....	.....	16	1	15	.....
	do ..... " 5	39	31	70	26	96	100	70	30	....	....	.....	.....	16	.....	16	.....
	do ..... " 6	41	52	93	15	108	150	93	57	....	....	.....	.....	16	.....	16	.....
	do ..... " 7	26	59	85	31	116	150	85	60	5	...	.....	.....	16	.....	16	.....
	do ..... " 8	379— 21	333— 65	86	17	103	150	86	63	....	1	.....	.....	16	.....	16	.....
	Wesminster ..... " 1	58	108	166	81	247	250	166	84	....	....	.....	.....	16	.....	16	.....
	do ..... " 2	52	128	180	76	256	350	180	168	....	2	.....	.....	16	.....	16	.....
	do ..... " 3	76	80	156	79	235	250	156	93	1	....	.....	.....	16	1	15	.....
	do ..... " 4	35	53	88	47	135	150	88	62	....	....	.....	.....	16	1	15	.....
	do ..... " 5	69	70	139	80	219	250	139	107	....	4	.....	.....	15	....	15	.....
	do ..... " 6	41	66	107	78	185	200	107	92	1	....	.....	.....	15	.....	15	.....

RETURN from the Records of the General Election to the Legislative Assembly in 1886, etc.—*Continued.*

Electoral District.	Names and Numbers of Polling Sub-Divisions.	Names of Candidates and No. of Votes Polled for Each.		Voters in each Sub-Division.			Ballot Papers sent out, and how Disposed of in each Sub-Division.							Tendered Ballot Papers sent out and how disposed of in each Sub-Division.			Population in each Constituency, as shewn by last Census.
				Total No. of Votes Polled.	No. of Votes remaining Unpolled.	No. of Names on the Voters' Lists.	No. of Ballot Papers sent out to each Sub-Division.	Used Ballot Papers.	Unused Ballot Papers.	Rejected Ballot Papers.	Spoiled Ballot Papers.	Ballot Papers given to Voters who afterwards declined to Vote.	Ballot Papers taken from Polling Places.	No. of Tendered Ballots sent out to each Sub-Division.	Used.	Unused.	
		Ross.	Brown.														
30 Middlesex, W. R.	Caradoc.....No. 1	67	80	147	54	201	225	147	75	3	....	.....	.....	20	.....	20	
	do ..... " 2	54	80	134	40	174	200	134	62	1	3	.....	.....	20	.....	20	
	do ..... " 3	96	81	177	45	222	250	177	72	1	....	.....	.....	20	.....	20	5230
	do ..... " 4	81	25	106	36	142	150	106	44	....	.....	.....	.....	20	.....	20	
	do ..... " 5	120	39	159	48	207	250	159	90	1	.....	.....	.....	20	.....	20	
	do ..... " 6	488— 70	352— 47	117	49	166	200	117	83	....	.....	.....	.....	20	.....	20	
	Ekfrid ..... " 1	115	67	182	42	224	250	182	67	1	.....	.....	.....	20	.....	20	
	do ..... " 2	73	37	110	17	127	150	110	40	....	.....	.....	.....	20	.....	20	
	do ..... " 3	66	41	107	11	118	150	107	43	....	.....	.....	.....	20	1	19	3023
	do ..... " 4	101	75	176	51	227	250	176	72	...	2	.....	.....	20	2	18	
	do ..... " 5	415— 60	259— 39	99	31	130	150	99	50	1	.....	.....	.....	20	.....	20	
	Mosa ..... " 1	33	39	72	55	127	150	72	78	....	.....	.....	.....	20	.....	20	
	do ..... " 2	91	40	131	40	171	200	131	69	..	.....	.....	.....	20	....	20	
	do ..... " 3	53	73	126	45	171	200	126	74	....	.....	.....	.....	20	2	18	2673
	do ..... " 4	250— 73	208— 56	129	47	176	200	129	71	....	.....	.....	.....	20	.. ..	20	
	Delaware ..... " 1	60	46	106	16	122	150	106	44	....	.....	.....	.....	20	.....	20	
	do ..... " 2	51	76	127	33	160	200	127	73	....	.....	.....	.....	20	.....	20	
	do ..... " 3	37	52	89	13	102	125	89	34	2	.....	.....	.....	20	.....	20	2674
	do ..... " 4	173— 25	207— 33	58	10	68	100	58	42	...	...	.....	.....	20	.....	20	
	Metcalfe ..... " 1	42	107	149	55	204	225	149	71	5	.....	.....	.....	20	.....	20	
	do ..... " 2	98	68	166	38	204	225	166	56	3	.....	.....	.....	20	.....	20	2192
	do ..... " 3	211— 71	252— 77	148	146	294	325	148	177	..	...	.....	.....	20	.....	20	
	Strathroy ..... " 1	53	60	113	72	185	225	113	112	...	.....	.....	.....	20	.....	20	
	do ..... " 2	55	26	81	40	121	150	81	68	1	.....	.....	....	20	.....	20	
	do ..... " 3	61	54	115	83	198	225	115	109	1	.....	.....	.....	20	...	20	
	do ..... " 4	62	73	135	75	210	250	135	113	2	...	.....	.....	20	2	18	3817

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RETURN from the Records of the General Election to the Legislative Assembly in 1886, etc.—*Continued.*

Electoral District.	Names and Numbers of Polling Sub-Divisions.	Names of Candidates and No. of Votes Polled for Each.		Voters in each Sub-Division.			Ballot Papers sent out, and how disposed of in each Sub-Division.							Tendered Ballot Papers sent out and how disposed of in each Sub-Division.			Population of each Constituency, as shewn by last Census.
				Total No. of Votes Polled.	No. of Votes remaining Unpolled.	No. of Names on the Voters' Lists.	No. of Ballot Papers sent out to each Sub-Division.	Used Ballot Papers.	Unused Ballot Papers.	Rejected Ballot Papers.	Spoiled Ballot Papers.	Ballot Papers given to Voters who afterwards declined to Vote.	Ballot Papers taken from Polling Places.	No. of Tendered Ballots sent out to each Sub-Division.	Used.	Unused.	
		Marter.	Bettes.														
Muskoka....	Brunel.....No. 1	64	68	132	66	198	250	132	118	....	....	.....	.....	18	1	17	No means of giving this information as there has been no Census taken since this District was formed.
	Bracebridge ..... " 1	95	56	151	49	200	250	151	98	1	....	.....	.....	18	.....	18	
	do . .. " 1	31	48	79	33	112	150	79	70	1	....	.....	.....	18	... .	18	
	Cardwell..... " 2	29	27	56	56	112	150	56	93	1	....	.....	.....	18	.....	18	
	Chaffey..... " 1	49	48	97	56	153	175	97	77	1	....	.....	.....	18	.....	18	
	do ..... " 2	15	41	56	41	97	125	56	69	....	....	.....	.....	18	.....	18	
	Draper .... " 1	94	75	169	65	234	250	169	78	3	...	.....	.....	18	.....	18	
	Gravenhurst..... " 1	102	69	171	37	208	250	171	79	....	....	.....	.....	18	. ..	18	
	do ..... " 2	51	62	113	36	149	175	113	60	2	....	.	.....	18	.....	18	
	Huntsville..... " 1	55	76	131	40	171	200	131	69	....	....	.....	.....	18	.....	18	
	Medora and Wood " 1	34	40	74	23	97	125	74	50	1	....	.....	.....	18	.....	18	
	do " 2	10	15	25	12	37	50	25	25	....	..	.....	.....	18	.....	18	
	do " 3	16	22	38	15	53	75	38	37	....	....	.....	.....	18	... .	18	
	do " 4	8	3	11	3	14	50	11	39	....	....	.....	.....	15	.....	15	
	do " 5	12	4	16	8	24	50	16	34	....	....	.....	.....	15	.....	15	
	Morrison..... .... " 1	73	71	144	57	201	225	144	78	1	2	.....	.....	15	.....	15	
	Monk ..... " 1	49	80	129	57	186	200	129	70	1	..	.....	.....	15	.....	15	
	Muskoka . ... " 1	49	54	103	54	157	175	103	70	2	...	.....	.....	15	....	15	
	do ..... " 2	106	28	134	57	191	225	134	87	4	....	.....	.....	15	.....	15	
	Macaulay.... .... " 1	61	50	111	58	169	200	111	87	2	....	.....	.....	15	.....	15	
	do ..... " 2	30	19	49	29	78	100	49	51	....	....	.....	.....	15	.....	15	
	McLean..... " 1	51	38	89	50	139	150	89	61	....	....	.....	...	15	.....	15	
	Oakley..... .... " 1	4	16	20	17	37	104	20	84	....	....	.....	.	15	.	15	
	do ..... " 2	21	15	36	14	50	96	36	60	....	....	.....	.....	15	.....	15	
	Ryde..... " 1	81	24	105	54	159	175	105	70	....	....	.....	.....	15	.....	15	
	Ridout.... ..... " 1	31	18	49	28	77	100	49	51	....	....	.....	.....	15	.....	15	
	Stisted..... ..... " 1	29	33	62	25	87	100	62	38	....	....	.....	.....	15	3	12	
	do ..... " 2	35	21	56	56	112	150	56	92	....	2	.....	.....	15	.....	15	

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RETURN from the Records of the General Election to the Legislative Assembly in 1886, etc.—*Continued.*

Electoral District.	Names and Numbers of Polling Sub-Divisions.	Names of Candidates and No. of Votes Polled for Each.		Voters in each Sub-Division.			Ballot Papers sent out, and how disposed of in each Sub-Division.							Tendered Ballot Papers sent out and how disposed of in each Sub-Division.			Population in each Constituency, as shewn by last Census.
				Total No. of Votes Polled.	No. of Votes remaining Unpolled.	No. of Names on the Voters' List.	No. of Ballot Papers sent out to each Sub-Division.	Used Ballot Papers.	Unused Ballot Papers.	Rejected Ballot Papers.	Spoiled Ballot Papers.	Ballot Papers given to Voters who afterwards declined to Vote.	Ballot Papers taken from Polling Places.	No. of Tendered Ballots sent out to each Sub-Division.	Used.	Unused.	
		Freeman.	McKnight.														
54 Norfolk, N.R.	Middleton ..... No. 1	47	22	69	59	128	163	69	92	1	1	. ...	.. ..	20	1	19	
	do ..... " 2	52	78	130	60	190	250	130	119	1	....	.....	.....	20	1	19	
	do .... " 3	38	73	111	47	158	205	111	94	....	....	.....	.....	20	.....	20	3514
	do ..... " 4	59	66	125	59	184	220	125	92	2	1	.....	.....	20	.....	....	
	do ..... " 5	263— 67	307— 68	135	38	173	235	135	96	2	2	.....	.....	20	1	19	
	Simcoe ..... " 1	43	57	100	53	153	220	100	120	....	....	.....	.....	20	....	20	
	do ..... " 2	38	56	94	45	139	201	94	107	....	....	.....	.....	20	.....	20	
	do .... " 3	30	37	67	46	113	180	67	113	..	....	.....	.....	20	1	19	2645
	do .... " 4	36	49	85	38	123	190	85	103	2	....	.....	.....	20	.....	20	
	do ..... " 5	173— 26	233— 34	60	20	80	150	60	90	....	....	.....	.....	20	.....	20	
	Townsend ..... " 1	55	41	96	44	140	175	96	75	2	2	... ..	... .	20	....	20	
	do ..... " 2	89	15	104	29	133	190	104	86	...	....	.....	.....	20	1	19	
	do ..... " 3	64	28	92	35	127	160	92	65	2	1	.....	.....	20	.....	20	
	do ..... " 4	53	45	98	26	124	155	98	57	....	....	.....	.....	20	.....	20	
	do ..... " 5	75	20	95	44	139	170	95	75	....	....	.....	.....	20	.....	20	4963
	do ..... " 6	76	39	115	3	118	175	115	58	1	1	.....	.....	20	.....	20	
	do ..... " 7	88	37	125	42	167	205	125	80	....	....	.....	.....	20	.....	20	
	do ..... " 8	55	26	81	49	130	160	81	77	1	1	.....	.....	20	.....	20	
	do ..... " 9	641— 86	260— 9	95	22	117	145	95	50	...	....	... .	.....	20	.....	20	
	Waterford ..... " 1	79	22	101	67	168	210	101	104	5	....	.....	.....	20	.....	20	1118
	do ..... " 2	148— 69	42— 20	89	85	174	220	89	130	1	....	.....	....	20	.....	20	
	Windham ..... " 1	63	43	106	61	167	205	106	99	....	....	.....	.....	20	.	20	
	do ..... " 2	61	63	124	33	157	190	124	66	....	....	.....	.....	20	.....	20	
	do ..... " 3	36	83	119	44	163	205	119	86	....	....	.....	.....	20	1	19	
	do . .... . " 4	47	75	122	38	160	195	122	72	1	....	.....	....	20	.....	20	4913
	do . ... " 5	80	49	129	46	175	215	120	82	2	2	....	.....	20	.....	20	

	do 6	60	46	106	35	141	180	106	74	....	....	.....	.....	20	.....	20			
	do 7	115— 68	420— 61	129	49	178	220	129	90	....	1	.....	....	20	....	20			
	Totals	1640 1262	1262	2902	1217	4119	5389	2902	2452	23	12	.....	.....	560	6	554	17153		
	Majority for Freeman.	378																	
		Willoughby.	Ferris.																
Northumberland, E. R.	Brighton Village No. 1	66	52	118	63	181	200	118	80	2	....		....	20	.....	20			
	do 2	46	37	83	45	128	150	83	63	3	1	.....	.....	20	.....	20	1541		
	do 3	29	48	77	47	124	150	77	71	2	.....	.....	.....	20	2	18			
	Brighton Township 1	42	56	105	71	176	200	105	92	3	.....	.....	.....	20	2	18			
	do 2	81	76	157	71	228	250	157	92	1	.....	.....	.....	20	3	17			
	do 3	90	76	166	75	241	300	166	133	....	1	.....	.....	20	1	19	3470		
	do 4	55	74	129	88	217	250	129	120	....	1	.....	.....	20	.....	20			
	do 5	59	91	150	60	210	225	150	73	2	.....	.....	.....	20	3	17			
	Campbellford 1	69	65	134	36	170	200	134	64	2	.....	.....	.....	20	12	8			
	do 2	83	113	196	78	274	300	196	101	1	1	1	....	20	13	7	1418		
	Colborne 1	98	48	146	45	191	200	146	51	3	.....	.....	.....	20	.....	20			
	do 2	31	33	64	18	82	100	64	34	2	.....	.....	.....	20	.....	20	1079		
	Cramahe 1	52	43	95	66	161	200	95	103	2	.....	.....	.....	19	.....	19			
	do 2	83	39	122	37	159	200	122	76	2	.....	.....	.....	20	1	19			
	do 3	85	48	133	47	180	200	133	61	4	.....	2	.....	20	.....	20	3481		
	do 4	101	58	159	45	204	225	159	64	2	.....	.....	.....	20	2	18			
	do 5	78	79	157	58	215	225	157	63	1	4	.....	.....	20	1	19			
	Hastings 1	66	62	128	57	185	200	128	69	3	.....	.....	.....	20	.....	20	193		
	Murray 1	110	57	167	64	231	250	167	78	5	.....	.....	.....	20	1	19			
	do 2	83	57	140	50	190	200	140	58	1	1	.....	.....	20	4	16			
	do 3	111	91	202	60	262	300	203	95	1	2	.....	.....	20	1	19	3566		
	do 4	61	94	155	40	195	225	155	70	....	.....	.....	.....	20	12	8			
	Percy 1	73	93	166	46	212	225	166	57	2	.....	.....	.....	20	.....	20			
	do 2	110	79	189	39	228	250	189	61	....	.....	.....	.....	20	.....	20			
	do 3	87	64	151	44	195	225	151	70	3	1	.....	.....	20	5	15	3768		
	do 4	13	46	59	47	106	156	59	87	1	3	.....	.....	20	.....	20			
	do 5	48	81	129	39	168	200	129	67	1	2	1	....	20	3	17			
	Seymour 1	45	49	94	50	144	200	94	104	2	.....	.....	.....	20	3	17			
	do 2	60	84	144	37	181	200	144	56	3	.....	.....	.....	20	.....	20			
	do 3	47	70	117	45	162	200	117	83	.....	.....	.....	.....	20	2	18			
	do 4	31	80	111	36	147	200	111	88	1	.....	.....	.....	20	2	18	3783		
	do 5	37	59	96	35	131	150	96	53	1	.....	.....	.....	20	....	20			
	do 6	44	18	62	24	86	100	62	37	1	.....	.....	....	20	.....	20			
	do 7	23	33	56	27	83	100	56	43	1	.....	.....	.....	20	.....	20			
	Totals	2204 2153	2153	4357	1690	6047	6950	4357	2514	58	17	4	....	679	73	606	22299		
	Maj. for Willoughby	51																	

RETURN from the Records of the General Election to the Legislative Assembly in 1886, etc.—*Continued.*

Electoral District.	Names and Numbers of Polling Sub-Divisions.	Names of Candidates and No. of Votes Polled for Each.		Voters in each Sub-Division.			Ballot Papers sent out, and how Disposed of in each Sub-Division.							Tendered Ballot Papers sent out and how disposed of in each Sub-Division.			Population in each Constituency, as shown by last Census.
				Total No. of Votes Polled.	No. of Votes remaining Unpolled.	No. of Names on the Voters' Lists.	No. of Ballot Papers sent out to each Sub-Division.	Used Ballot Papers.	Unused Ballot Papers.	Rejected Ballot Papers.	Spoiled Ballot Papers.	Ballot Papers given to Voters who afterwards declined to Vote.	Ballot Papers taken from Polling Places.	No. of Tendered Ballots sent out to each Sub-Division.	Used.	Unused.	
		Field.	Graveley.														
Northumberland, W. R.	Cobourg.....No. 1	66	82	148	57	205	250	148	97	4	1	.....	.....	20	.....	20	
	do ..... " 2	75	59	134	74	208	250	134	115	....	1	...	....	20	....	20	
	do ..... " 3	92	42	134	94	228	250	134	116	....	....	.....	.....	20	1	19	4957
	do ..... " 4	68	81	149	73	222	250	149	99	2	....	.....	.....	20	.....	20	
	do ..... " 5	93	53	146	75	221	250	146	104	....	....	.....	.....	20	1	19	
	do ..... " 6	493— 99	366— 49	148	66	214	250	148	98	3	1	.....	.....	20	.....	20	
	Hamilton..... " 1	77	40	117	68	185	250	117	132	....	1	.....	.....	20	.....	20	
	do ..... " 2	70	58	128	79	207	250	128	119	3	....	.....	.....	20	3	17	
	do ..... " 3	65	61	126	75	201	250	126	124	....	....	.....	.. ..	20	..	20	5155
	do ..... " 4	95	57	152	81	233	250	152	95	1	2	.....	.....	20	.....	20	
	do ..... " 5	82	99	181	34	215	250	181	67	....	2	.. ..	.....	20	.. ..	20	
	do ..... " 6	453— 64	368— 53	117	68	185	250	117	133	....	....	.....	.....	20	.....	20	
	Haldimand..... " 1	41	44	85	35	120	250	85	165	....	....	.....	.....	20	.....	20	
	do .. ... " 2	79	31	110	23	133	250	110	140	...	....	.....	.....	20	.....	20	
	do ... ... " 3	95	46	141	32	173	250	141	109	....	....	.....	.....	20	.....	20	
	do ..... " 4	51	26	77	24	101	250	77	172	....	1	.....	.....	20	1	19	
	do ..... " 5	97	35	132	43	175	250	132	115	2	1	.....	.....	20	.....	20	5401
	do ..... " 6	75	45	120	43	163	250	120	130	....	....	.....	.....	20	3	17	
	do ..... " 7	53	45	98	48	146	250	98	151	....	1	.....	.....	20	.....	20	
	do ..... " 8	55	35	90	43	133	250	90	158	1	1	.....	....	20	.....	20	
	do ..... " 9	45	44	89	26	115	250	89	160	1	...	.....	.....	20	2	18	
	do ..... " 10	657— 66	385— 34	100	18	118	250	100	150	....	...	.....	.....	20	.. .	20	
	Alnwick..... " 1	87	79	166	47	213	300	166	132	2	....	.....	.....	20	.....	20	1471
	do .... " 2	107— 20	116— 37	57	21	78	200	57	141	2	....	.....	.....	20	5	15	
	Totals.....	1710 1235	1235	2945	1247	4192	6000	2945	3022	21	12	.....	.....	480	16	464	16984
	Majority for Field...	475															

RETURN from the Records of the General Election to the Legislative Assembly in 1886, etc.—*Continued.*

Electoral District.	Names and Numbers of Polling Sub-Divisions.	Names of Candidates and No. of Votes Polled for Each.		Voters in each Sub-Division.			Ballot Papers sent out, and how disposed of in each Sub-Division.							Tendered Ballot Papers sent out and how disposed of in each Sub-Division.			Population in each Constituency, as shewn by last Census.
				Total No. of Votes Polled.	No. of Votes remaining Unpolled.	No. of Names on the Voters' Lists.	No. of Ballot Papers sent out to each Sub-Division.	Used Ballot Papers.	Unused Ballot Papers.	Rejected Ballot Papers.	Spoiled Ballot Papers.	Ballot Papers given to Voters who afterwards declined to Vote.	Ballot Papers taken from Polling Places.	No. of Tendered Ballots sent out to each Sub-Division.	Used.	Unused.	
		Dryden.	Larke.														
Ontario, S. R. —*Continued.*	Pickering ..... No. 5	35	59	94	45	139	140	94	46	....	....	.....	.....	20	.....	20	
	do ..... " 6	37	52	89	55	144	140	89	51	....	....	.....	.....	20	.....	20	6883
	do ..... " 7	54	25	79	42	121	120	79	41	....	....	.....	.....	20	.....	20	
	do ..... " 8	68	41	109	66	175	190	109	81	....	....	.....	.....	20	1	19	
	do ..... " 9	37	58	95	41	136	140	95	45	....	....	.....	.....	20	.....	20	
	do ..... " 10	81	33	114	50	164	170	114	55	1	....	.....	.....	20	.....	20	
	do ..... " 11	672 63	429— 21	84	54	138	140	84	55	1	....	.....	.....	20	.....	20	
	Whitby Tp. ..... " 1	81	63	144	67	211	210	144	65	1	....	.....	.....	10	.....	10	
	do ..... " 2	77	71	148	41	189	190	148	42	....	....	.....	.....	20	....	20	
	do ..... " 3	83	80	163	49	212	210	163	45	1	1	.....	.....	20	.....	20	2946
	do ..... " 4	325— 84	287— 73	157	47	204	210	157	49	2	2	.....	.....	20	.....	20	
	Town Whitby..... " 1	57	59	116	59	175	180	116	62	2	....	.....	.....	10	.....	10	
	do ..... " 2	57	60	117	62	179	180	117	62	....	1	.....	.....	10	.....	10	
	do ..... " 3	33	43	76	26	102	110	76	33	1	....	.....	.....	10	.....	10	3140
	do ..... " 4	70	57	127	46	173	180	127	53	....	....	.....	.....	10	.....	10	
	do ..... " 5	254— 37	285— 66	103	37	140	140	103	36	1	....	.....	.....	10	.....	10	
	East Whitby..... " 1	69	31	100	70	170	170	100	66	2	1	.....	1	20	.....	20	
	do ..... " 2	75	54	129	53	182	190	129	61	....	....	.....	.....	20	....	20	
	do ..... " 3	106	48	154	48	202	200	154	40	4	2	....	.....	20	.....	20	3417
	do ..... " 4	72	91	163	47	210	210	163	47	....	....	.....	.....	20	.....	20	
	do ..... " 5	365— 43	296— 72	115	43	158	160	115	44	1	....	.....	.....	20	1	19	
	Oshawa ..... " 1	95	127	222	95	317	320	222	98	....	....	.....	.....	20	1	19	
	do ..... " 2	78	108	186	124	310	310	186	121	....	3	.....	.....	20	2	18	
	do ..... " 3	99	67	166	85	251	250	166	83	1	....	.....	.....	20	.....	20	3992
	do ..... " 4	372—100	381— 79	179	98	277	280	179	101	....	....	.....	.....	20	1	19	
	Reach..... " 1	75	61	136	43	179	180	136	42	2	....	.....	.....	20	.....	20	
	do ..... " 2	49	78	127	17	144	145	127	18	....	....	.....	.....	20	.....	20	
	do ..... " 3	24	57	81	26	107	110	81	28	1	....	.....	.....	20	1	19	

RETURN from the Records of the General Election to the Legislative Assembly in 1886, etc.—*Continued.*

Electoral District.	Names and Numbers of Polling Sub-Divisions.	Names of Candidates and No. of Votes Polled for each.			Voters in each Sub-Division.			Ballot Papers sent out, and how Disposed of in each Sub-Division.							Tendered Ballot Papers sent out and how disposed of in each Sub-Division.			Population in each Constituency, as shewn by last Census.
					Total No. of Votes Polled.	No. of Votes remaining Unpolled.	No. of names on the Voters' Lists.	No. of Ballot papers sent out to each Sub-Division.	Used Ballot Papers.	Unused Ballot Papers.	Rejected Ballot Papers.	Spoiled Ballot Papers.	Ballot Papers given to Voters who afterwards declined to Vote.	Ballot Papers taken from Polling Places.	No. of Tendered Ballots sent out to each Sub-Division.	Used.	Unused.	
		Bronson.	Baskerville	Clancy.														
Ottawa—*Continued* ...	No. 22 A	38	49	1	88	55	143	200	88	111	1	....	.....	.....	51	14	37	
	" 22 B	50	31	.....	81	73	154	250	81	167	2	....	.....	.....	91	25	66	
	" 23.....	75	58	1	134	114	248	320	134	182	2	2	... ..	.....	74	18	56	
	" 24.....	19	22	... .	41	36	77	181	41	140	....	....	.....	.....	61	20	41	
	Totals.....	1815 1538	1538	10	3363	2994	6357	8801	3363	5371	38	29	.....	.....	1996	477	1519	27412
	Majority for Bronson.	277																
		Mowat.	Wilson.															
Oxford, N. R.	Woodstock—																	
	St. Andrews.....No. 1	61	40		101	69	170	175	101	69	5	....	.....	.....	19			
	do ..... " 2	22	65		87	40	127	129	87	42	....	....	.....	.....	20			
	do .... " 3	20	43		63	62	125	130	63	65	1	1	.....	.....	19			
	St. George's ..... " 1	42	32		74	80	154	160	74	86	....	....	.....	.....	19			
	do ..... " 2	48	42		90	50	140	145	90	55	....	....	.....	.....	20			
	do ..... " 3	31	48		79	59	138	140	79	60	1	.. .	.....	.....	19	.....	.....	5373
	St. Patrick's .... " 1	31	41		72	79	151	162	72	90	....	....	.....	.....	19			
	do .... " 2	41	48		89	102	191	200	89	110	1	....	.....	.....	19			
	St. John's..... " 1	53	46		99	63	162	169	99	70	....	....	.....	.....	21			
	do ..... " 2	35	64		99	58	157	159	99	59	1	....	.....	.....	19			
	St. David's	408— 24	505— 36		60	77	137	209	60	149	....	....	.....	.....	19			
	Blandford.....No. 1	21	31		52	93	145	150	52	95	2	1	.....	.....	20			
	do .... " 2	30	19		49	63	112	120	49	70	....	1	.....	.....	19			

RETURN from the Records of the General Election to the Legislative Assembly in 1886, etc.—*Continued.*

Electoral District.	Names and Numbers of Polling Sub-Divisions.	Names of Candidates and No. of Votes Polled for Each.			Voters in each Sub-Division.			Ballot Papers sent out, and how Disposed of in each Sub-Division.							Tendered Ballot Papers sent out and how disposed of in each Sub-Division.			Population in each Constituency, as shown by last Census.
					Total No. of Votes Polled.	No. of Votes remaining Unpolled.	No. of Names on the Voters' Lists.	No. of Ballot Papers sent out to each Sub-Division.	Used Ballot Papers.	Unused Ballot Papers.	Rejected Ballot Papers.	Spoiled Ballot Papers.	Ballot Papers given to Voters who afterwards declined to Vote.	Ballot Papers taken from Polling Places.	No. of Tendered Ballots sent out to each Sub-Division.	Used.	Unused.	
		McKay.	Williams.	Cooke.														
Oxford, S. R. —*Continued.*	North Oxford ..... No. 1	46	36	.....	82	29	111	119	82	36	1	....	.....	.....	20	.....	20	1645
	do ..... " 2	46	26	1	73	18	91	97	73	23	....	1	.....	.....	20	1	19	
	do ..... " 3	67	18	.....	85	30	115	125	85	40	....	....	.....	.....	20	.....	20	
	do ..... " 4	191— 32	118— 38	1— 0	70	35	105	115	70	45	....	....	.....	.....	20	.....	20	
	Dereham ..... " 1	81	45	.....	126	61	187	197	126	71	....	....	.....	.....	20	.....	20	4486
	do ..... " 2	51	56	.....	107	63	170	180	107	73	....	....	.....	.....	20	2	18	
	do ..... " 3	61	57	1	119	59	178	188	119	68	1	....	.....	.....	20	.....	20	
	do ..... " 4	48	66	1	115	70	185	195	115	80	....	....	.....	.....	20	.....	20	
	do ..... " 5	31	72	1	104	64	168	178	104	74	....	....	.....	.....	20	.....	20	
	do ..... " 6	336— 64	362— 66	3— 0	130	38	168	178	130	48	....	....	.....	.....	20	.....	20	
	Tilsonburg ..... " 1	51	81	1	133	67	200	210	133	76	1	....	.....	.....	21	1	20	1873
	do ..... " 2	46	52	.....	98	75	173	183	98	84	1	....	.....	.....	20	.....	20	
	do ..... " 3	152-- 55	205— 72	2— 1	128	81	209	219	128	91	....	....	.....	.....	20	.....	20	
	Village of Norwich. " 1	16	18	50	84	57	141	151	84	66	....	1	.....	.....	21	.....	21	1411
	do " 2	27	18	44	89	70	159	169	89	79	1	....	.....	.....	20	.....	20	
	do " 3	68 – 25	51— 15	118 – 24	64	49	113	123	64	59	....	....	.....	.....	20	.....	20	
	North Norwich.... " 1	52	27	36	115	55	170	180	115	64	1	....	.....	.....	20	.....	20	2632
	do ... " 2	75	28	24	127	43	170	180	127	52	....	1	.....	.....	20	.....	20	
	do .... " 3	64	57	5	126	32	158	168	126	42	....	....	.....	.....	20	.....	20	
	do .... " 4	254— 68	133— 21	76— 11	95	32	127	157	95	61	....	1	.....	.....	21	.....	21	
	South Norwich .... " 1	65	20	7	92	80	172	182	92	89	1	....	.....	.....	20	.....	20	3360
	do .... " 2	41	32	15	88	61	149	159	88	71	....	....	.....	.....	20	.....	20	
	do .... " 3	65	31	4	100	82	182	187	100	85	2	....	.....	.....	21	.....	21	
	do .... " 4	73	29	3	105	42	147	157	105	51	1	....	.....	.....	20	.....	20	
	do .... " 5	305— 61	152— 40	34— 5	106	55	161	170	106	64	....	....	.....	.....	20	2	18	
	Totals.....	2216	1626	244	4086	2108	6194	6478	4086	2353	27	12	... ..	.....	764	14	750	25032
		1626																
	Majority for McKay..	590																

RETURN from the Records of the General Election to the Legislative Assembly in 1886, etc. *Continued.*

Electoral District.	Names and Numbers of Polling Sub-Divisions.	Names of Candidates and No. of Votes Polled for Each.		Voters in each Sub Division.			Ballot Papers sent out, and how Disposed of in each Sub-Division.							Tendered Ballot Papers sent out and how disposed of in each Sub-Division.			Population in each Constituency, as shewn by last Census.
				Total No. of Votes Polled.	No. of Votes remaining Unpolled.	No. of Names on the Voters' Lists.	No. of Ballot Papers sent out to each Sub-Division.	Used Ballot Papers.	Unused Ballot Papers.	Rejected Ballot Papers.	Spoiled Ballot Papers.	Ballot Papers given to Voters who afterwards declined to Vote.	Ballot Papers taken from Polling Places.	No. of Tendered Ballots sent out to each Sub-Division.	Used.	Unused.	
Parry Sound. *Continued.*		Armstrong.	McEachren.														
	Spence	20	60	80	.....	.....	100	80	18	2	.....	.....	.....	10	.....	10	
	Front Creek	3	16	19	.....	.....	50	19	31	.....	.....	.....	.....	10	.....	10	
	Novar	24	33	57	.....	.....	100	57	43	.....	.....	.....	.....	10	.....	10	
	Proudfoot	15	5	20	.....	.....	50	20	30	.....	.....	.....	.....	10	.....	10	
	Whitestone	19	9	28	.....	.....	100	28	71	.....	1	.....	.....	10	.....	10	
	Balsam Lake	7	7	14	.....	.....	50	14	34	.....	2	.....	.....	10	.....	10	
	Totals	1199 1112	1112	2311	.....	.....	5525	2311	3170	17	24	3	.....	610	12	598	
	Maj. for Armstrong	87															
		Chisholm.	Campbell.														
Peel	Brampton W.....No. 1	72	88	160	70	230	250	160	90	.....	.....	.....	.....	25	1	24	2920
	do ..... " 2	69	71	140	76	216	250	140	105	5	.....	.....	.....	25	1	24	
	do ..... " 3	70	71	141	78	219	250	141	108	.....	1	.....	.....	25	1	24	
	do ..... " 4	305— 94	311— 81	175	42	217	250	175	72	2	1	.....	.....	25	.....	25	
	Toronto ..... " 1	37	67	104	39	143	250	104	144	2	.....	.....	.....	25	1	24	5873
	do ..... " 2	47	73	120	31	151	250	120	129	.....	1	.....	.....	25	.....	25	
	do ..... " 3	44	65	109	50	159	250	109	141	.....	.....	.....	.....	25	.....	25	
	do ..... " 4	74	38	112	32	144	250	112	138	.....	.....	.....	.....	25	2	23	
	do ..... " 5	44	86	130	50	180	250	130	118	2	.....	.....	.....	25	.....	25	
	do ..... " 6	87	75	162	40	202	250	162	88	.....	.....	.....	.....	25	.....	25	
	do ..... " 7	52	65	117	28	145	250	117	131	2	.....	.....	.....	25	.....	25	
	do ..... " 8	75	55	130	57	187	250	130	118	2	.....	.....	.....	25	.....	25	
	do ..... " 9	521— 61	562— 38	99	14	113	250	99	151	.....	.....	.....	.....	25	4	21	

RETURN from the Records of the General Election to the Legislative Assembly in 1886, etc.—*Continued.*

Electoral District.	Names and Numbers of Polling Sub-Divisions.	Names of Candidates and No. of Votes Polled for Each.		Voters in each Sub-Division.			Ballot Papers sent out, and how Disposed of in each Sub-Division.							Tendered Ballot Papers sent out and how disposed of in each Sub-Division.			Population in each Constituency, as shewn by last Census.
				Total No. of Votes Polled.	No. of Votes remaining Unpolled.	No. of Names on the Voters' Lists.	No. of Ballot Papers sent out to each Sub-Division.	Used Ballot Papers.	Unused Ballot Papers.	Rejected Ballot Papers.	Spoiled Ballot Papers.	Ballot Papers given to Voters who afterwards declined to Vote.	Ballot Papers taken from Polling Places.	No. of Tendered Ballots sent out to each Sub-Division.	Used.	Unused.	
		Hess.	Schmidt.														
Perth, N.R.. *Continued.*	Elma ..... " 4	88	65	153	54	207	215	153	58	....	4	.....	.....	22	.....	22	
	do ..... " 5	417— 96	355— 62	158	27	185	195	158	37	....	....	.....	.....	19	1	18	
	Wallace ..... " 1	89	36	125	35	160	170	125	44	1	....	.....	.....	17	.....	17	
	do ..... " 2	63	65	128	19	147	157	128	27	2	....	.....	.....	16	.....	16	
	do ..... " 3	104	45	149	33	182	192	149	41	2	....	.....	.....	19	.....	19	3655
	do ..... " 4	81	32	113	39	152	162	113	48	....	1	.....	.....	16	.....	16	
	do ..... " 5	411— 74	245— 67	141	35	176	185	141	42	....	2	.....	.....	19	.....	19	
	Mornington ..... " 1	59	47	106	20	126	136	106	27	3	....	.....	.....	14	.....	14	
	do ..... " 2	52	81	133	30	163	173	133	36	3	1	.....	.....	17	1	16	
	do ..... " 3	69	45	114	29	143	153	114	38	1	....	.....	.....	15	.....	15	
	do ..... " 4	77	51	128	20	148	158	128	26	4	....	.....	.....	16	1	15	3998
	do ..... " 5	26	89	115	17	132	142	115	24	2	1	.....	.....	14	1	13	
	do ..... " 6	348— 65	373— 60	125	19	144	154	125	27	1	1	.....	.....	15	1	14	
	Listowel ..... " 1	69	45	114	86	200	210	114	95	1	....	.....	.....	21	1	20	
	do ..... " 2	66	44	110	87	197	207	110	97	....	....	.....	.....	21	2	19	
	do ..... " 3	36	30	66	57	123	133	66	63	2	2	.....	.....	13	.....	13	2688
	do ..... " 4	83	57	140	46	186	196	140	52	3	1	.....	.....	20	.....	20	
	do ..... " 5	311— 57	218— 42	99	84	183	193	99	91	1	2	.....	.....	19	2	17	
	Milverton	53— 53	52— 52	105	21	126	136	105	30	1	....	.....	.....	14	.....	14	562
	Totals.....	2445 2403	2403	4848	2135	6983	7422	4848	2489	54	30	1		744	15	729	29560
	Majority for Hess....	42															

RETURN from the Records of the General Election to the Legislative Assembly in 1886, etc.—*Continued.*

Electoral District.	Names and Numbers of Polling Sub-Divisions.	Names of Candidates and No. of Votes Polled for Each.			Voters in each Sub-Division.			Ballot Papers sent out, and how Disposed of in each Sub-Division.							Tendered Ballot Papers sent out and how disposd of in each Sub-Division.			Population in each Constituency, as shewn by last Census.
					Total No. of Votes Polled.	No. of Votes remaining Unpolled.	No. of names on the Voters' Lists.	No. of Ballot Papers sent out to each Sub-Division.	Used Ballot Papers.	Unused Ballot Papers.	Rejected Ballot Papers.	Spoiled Ballot Papers.	Ballot Papers given to Voters who afterwards declined to Vote.	Ballot Papers taken from Polling Places.	No. of Tendered Ballots sent out to each Sub-Division.	Used.	Unused.	
		Blezard.	Stephenson	McLeod.														
Peterborough E. R.—*Con.*	Belmont & Methuen No. 1	48	69	1	118	69	187	210	118	91	....	1	.....	.....	20	.....	20	
	do " 2	22	53	.....	75	55	130	150	75	75	....	....	.....	.....	20	.....	20	
	do " 3	11	107	.....	118	65	183	210	119	89	1	1	...	.....	20	.....	20	
	Burleigh, Anstruther & Chandos ..... " 1	15	14	....	29	16	45	60	31	26	2	1	.....	.....	20	3	17	
	do " 2	37	13	.....	50	20	70	90	50	40	....	....	.....	.....	20	.....	20	
	do " 3	29	15	1	45	13	58	80	45	35	....	....	.....	.....	20	8	12	
	do " 4	38	7	.....	45	21	66	85	45	40	....	....	.....	.....	20	20	....	
	Douro..... .. .. " 1	50	24	.....	74	56	130	150	74	76	....	....	.....	.....	20	.....	20	
	do . ... " 2	74	10	1	85	48	133	155	86	67	1	1	.....	.....	20	.....	20	
	do ..... " 3	76	14	2	92	42	134	160	92	68	....	....	.....	.....	20	.....	20	
	do .... " 4	26	39	1	66	55	121	140	66	74	....	....	.....	.....	20	.....	20	
	Dummer ..... " 1	46	57	....	103	43	146	160	104	55	1	....	.....	.....	20	.....	20	
	do ..... " 2	41	40	....	81	16	97	120	81	39	....	....	.....	.....	20	1	19	
	do ..... " 3	66	49	.....	115	46	161	185	115	69	....	1	.....	.....	20	2	18	
	do ..... " 4	52	33	.....	85	29	114	135	86	48	1	....	.....	.....	20	.....	20	
	Norwood	84	98	2	184	49	233	260	185	74	1	..	.....	.....	20	.....	20	
	Otonabee .. ..No. 1	67	20	....	87	20	107	130	87	42	....	1	.....	.....	20	.....	20	
	do ..... " 2	90	16	3	109	31	140	160	109	51	....	...	.....	.....	20	....	20	
	do ..... " 3	81	56	3	140	34	174	200	140	60	....	....	.....	.....	20	.....	20	
	do ..... " 4	49	33	1	83	63	146	170	83	86	....	1	.....	.....	20	.....	20	
	do ..... " 5	63	34	1	98	43	141	170	98	72	....	....	.....	.....	20	.....	20	
	do ..... " 6	57	44	1	102	57	159	190	103	86	1	....	.....	.....	20	.....	20	
	Totals.....	1438 1098	1098	25	2561	1203	3764	4370	2579	1765	18	8	.....	.....	540	39	501	
	Majority for Blezard..	340																

RETURN from the Records of the General Election to the Legislative Assembly in 1886.—*Continued.*

Electoral District.	Names and Numbers of Polling Sub-Divisions.	Names of Candidates and No. of Votes Polled for Each.		Voters in each Sub-Division.			Ballot Papers sent out and how disposed of in each Sub-Division.							Tendered Ballot Papers sent out and how disposed of in each Sub-Division.			Population in each Constituency, as shown by last Census.
				Total No. of Votes Polled.	No. of Votes remaining Unpolled.	No. of Names on the Voters' List.	No. of Ballot Papers sent out to each Sub-Division.	Used Ballot Papers.	Unused Ballot Papers.	Rejected Ballot Papers.	Spoiled Ballot Papers.	Ballot Papers given to Voters who afterwards declined to Vote.	Ballot Papers taken from Polling Places.	No. of Tendered Ballots sent out to each Sub-Division.	Used.	Unused.	
		Evanturel.	Molloy.														
Prescott—*Continued.*	Caledonia ..... " 1	8	35	43	30	73	95	43	52	....	....	....	....	19	.....	19	
	do ..... " 2	36	63	99	44	143	184	99	85	....	....	....	....	19	.....	19	
	do ..... " 3	61	23	84	28	112	200	84	116	....	....	....	....	19	.....	19	1751
	do ..... " 4	123 18	160— 39	57	25	82	150	57	93	....	....	....	....	19	.....	19	
	Alfred ..... " 1	148	14	162	55	217	200	162	38	....	....	....	....	19	.....	19	
	do ..... " 2	80	33	113	47	160	200	113	86	1	....	....	....	19	.....	19	
	do ..... " 3	64	32	96	49	145	200	96	103	1	....	....	....	30	.....	30	3208
	do ..... " 4	392—100	83 — 4	104	76	180	250	104	144	2	....	....	....	19	.....	19	
	Longueuil ..... " 1	42	9	51	27	78	100	51	48	1	....	....	....	19	.....	19	
	do ..... " 2	77— 35	64— 55	90	39	129	150	90	59	1	....	....	....	19	.....	19	1162
	L'Orignal	25— 25	105—105	130	41	171	200	130	70	...	....	....	....	19	.....	19	853
	N. Plantagenet....No. 1	45	31	76	23	99	150	76	73	1	....	....	....	19	.....	19	
	do .... " 2	75	84	159	39	198	250	159	90	1	....	....	....	19	....	19	
	do .... " 3	129	23	152	45	197	250	152	94	4	...	....	....	19	.....	19	3977
	do .... " 4	24	59	83	35	118	150	83	65	1	1	....	....	19	1	18	
	do .... " 5	346— 73	236 — 39	112	47	159	199	112	87	....	....	....	....	19	2	17	
	S. Plantagenet..... " 1	35	84	119	29	148	200	119	80	1	....	....	....	19	.....	19	
	do ..... " 2	22	81	103	43	146	250	103	147	....	....	....	....	19	.....	19	
	do .... " 3	12	60	72	33	105	149	72	75	1	1	....	....	19	2	17	2524
	do ..... " 4	110	8	118	36	154	250	118	131	1	....	....	....	19	.....	19	
	do .... " 5	229 — 50	240 — 7	57	58	115	150	57	89	4	....	....	....	19	.....	19	
	Hawkesbury Vill.. " 1	87	48	135	33	168	200	135	65	....	....	....	....	19	.....	19	
	do .... " 2	104— 17	111— 63	80	32	112	150	80	68	....	2	....	....	19	.....	19	1920
	Totals.....	1665 1522	1522	3187	1396	4583	6027	3187	2806	27	7	.....	.. ...	600	5	595	22837
	Majority for Evanturel.	143															

RETURN from the Records of the General Election to the Legislative Assembly in 1886, etc.—*Continued.*

Electoral District.	Names and Numbers of Polling Sub-Divisions.	Names of Candidates and No. of Votes Polled for each.			Voters in each Sub-Division.			Ballot Papers sent out, and how Disposed of in each Sub-Division.							Tendered Ballot Papers sent out and how disposed of in each Sub-Division.			Population in each Constituency, as shewn by last Census.
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		McAndrew.	Dowling.	Tierney.														
Renfrew S.R. —*Continued.*	Brougham	43	14	.....	57	29	86	100	57	42	1	....	.....	.....	15	.....	....	574
	Brudenell & Lyndock	174— 59	146— 105	5— 0	164	83	247	260	164	87	2	7	.....	.....	25	.....	....	1270
	Grattan ..... No. 1	43	24	1	68	27	95	120	68	52	.....	.....	.....	.....	15	.....	....	1893
	do ..... " 2	4	129	1	134	65	199	240	134	99	1	6	.....	.....	20	.....	....	
	do ..... " 3	58— 11	210 — 57	2 — 0	68	50	118	130	68	62	....	.....	.....	.....	15	.....	....	
	Griffith & Mattawatchan.	51— 51	9— 9	.....	60	36	96	110	60	50	.....	.....	.....	.....	15	.....	....	614
	Hagarty Jones, etc. No. 1	3	103	.....	106	76	182	220	106	107	...	7	.....	.....	25	.....	....	1535
	do " 2	1	9	.....	10	25	35	60	10	50	....	.....	.....	.....	15	.....	....	
	do " 3	17 - 13	138— 26	.....	39	6	45	60	39	20	1	.....	.....	.....	15	.....	....	
	Horton ..... " 1	71	30	.....	101	67	168	190	101	89	....	.....	.....	.....	25	.....	....	1510
	do ..... " 2	105— 34	67— 37	.. ....	71	52	123	140	71	69	..	.....	.....	.....	15	.....	....	
	McNab ..... " 1	72	23	6	101	68	169	190	101	85	2	2	.....	.....	20	.....	....	3092
	do ..... " 2	34	15	32	81	98	179	210	81	123	3	3	.....	.....	20	.....	....	
	do ..... " 3	23	4	48	75	82	157	200	75	121	2	2	.....	.....	20	.....	....	
	do ..... " 4	158 - 29	86— 41	103— 17	87	73	160	200	87	112	1	...	.....	.....	.....	.....	....	
	Radcliffe & Raglan	62— 62	34— 34	....	96	44	140	180	96	83	....	1	.....	.....	20	... ...	....	785
	Renfrew ..... No. 1	76	45	3	124	92	216	250	124	120	2	4	.....	.....	25	.....	....	1605
	do ..... " 2	145 - 69	74 — 29	3— 0	98	88	186	220	98	121	....	1	.....	.....	25	.....	....	
	Sebastopol	24 — 24	68— 68	.....	92	48	140	160	92	66	....	2	.....	.....	20	.....	....	620
	Totals	1050 1041	1041	199	2290	1610	3900	4500	2290	2148	21	41	.....	.....	500	.....	.....	19152
	Maj. for McAndrew..	9																

		Dunlop.	Murray.	Rebellard.	Cummings.	McCaul.
Renfrew, N. R.	No. 1	64	84	14	116	1
	No. 2	98	76	54	49	5
Alice		59	62	70	30	3
do		26	186			
Algona South		24	38			
Brougham		1	24			
do		6	26			
Head, Clara & Maria		23	64			
Pembroke town		94	115			
do		73	114			
Pembroke township		41	60			
Petawawa		72	16			
Ross		44	44			
do		15	43			
do		28	11			
Rolph, Buchanan & Wylie		26	26			
Stafford		40	37			
do		74	37			
Westmeath		42	23			
do		63	47			
do		18	99			
Whitewood & North Algona		72	56			
do		79	56			
do		91	31			
do		43				
Totals		1439	1615			
			1439			
Majority for Murray			176			

Russell	No. 1	1912	30		18	3453
	No. 2	759	30		18	18
		1757	30		18	17
		953	30		18	16
		2839	30		18	
		688	30		18	
		689	30		18	
		2131	30		18	
		699	30		18	
		1055	30		18	
		3229	30		18	
		2406	30		18	
		19124	136	44	180	

RETURN from the Records of the General Election to the Legislative Assembly in 1886, etc.—*Continued.*

Electoral District.	Names and Numbers of Polling Sub-Divisions.	Names of Candidates and No. of Votes Polled for Each.			Voters in each Sub-Division.			Ballot Papers sent out and how Disposed of in each Sub-Division.							Tendered Ballot Papers sent out and how disposed of in each Sub-Division.			Population in each Constituency, as shewn by last Census.
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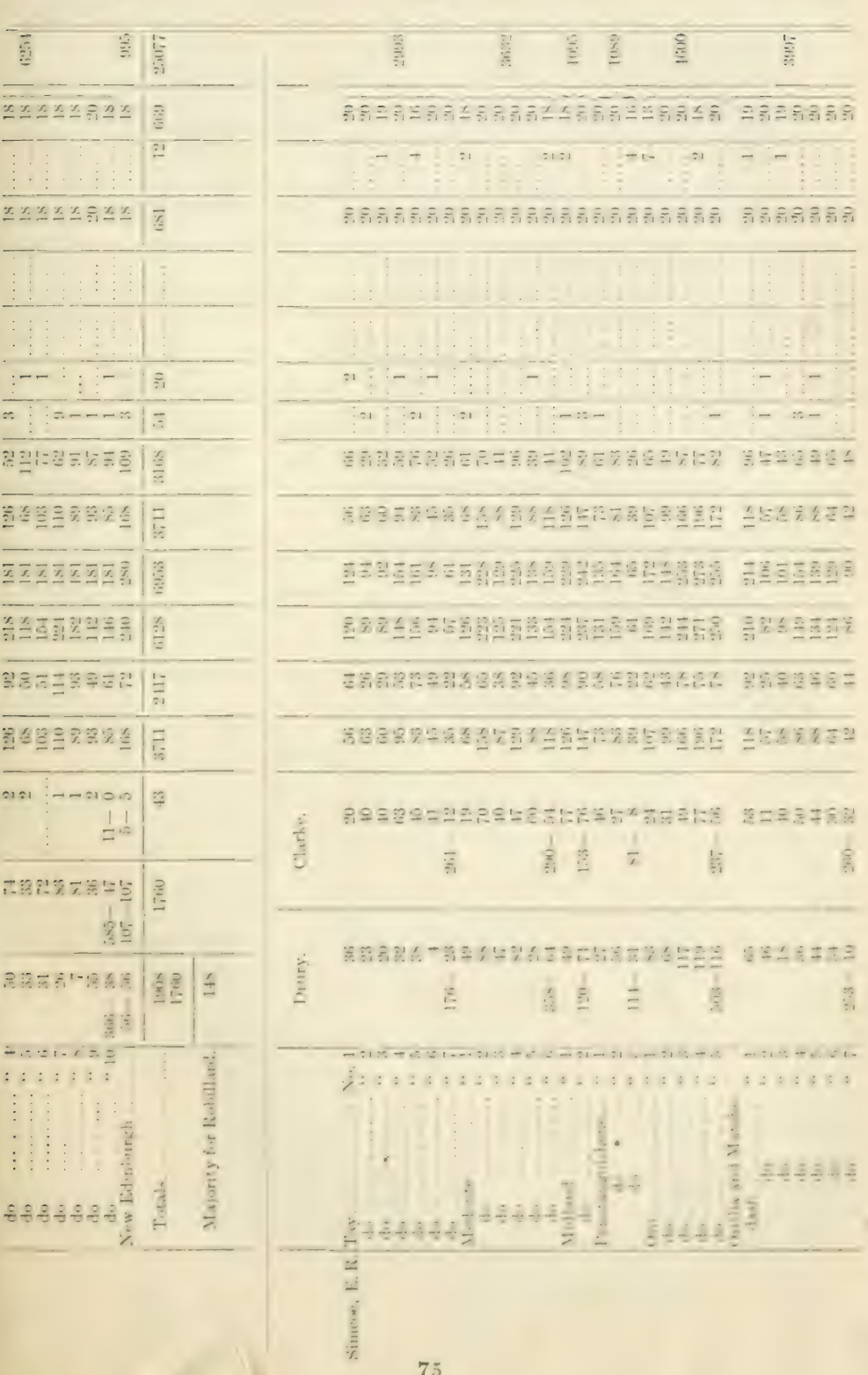
		Robillard.	Cummings.	McCaul.														
Russell—*Continued.*	Cumberland ..... " 1	49	29	.....	78	54	132	180	78	102	....	....	.....	.....	18	.....	18	
	do ..... " 2	50	110	.....	160	97	257	180	160	18	2	....	.....	.....	18	.....	18	
	do ..... " 3	18	87	2	107	77	184	180	107	69	3	1	.....	.....	18	.....	18	3535
	do ..... " 4	162 — 45	266 — 40	2 — 0	85	50	135	181	85	90	4	2	.....	.....	17	.....	17	
	Cambridge ..... " 1	94	20	1	115	66	181	181	115	63	2	1	.....	.....	18	....	18	
	do ..... " 2	50	52	.....	102	65	167	181	102	78	....	1	.....	.....	18	1	17	
	do ..... " 3	27	30	1	58	34	92	180	58	119	2	1	.....	.....	13	.....	13	1676
	do ..... " 4	184 — 13	104 — 2	3 — 1	16	44	60	180	16	163	1	....	.....	.....	18	.....	18	
	Clarence ..... No. 1	106	15	.....	121	27	148	180	121	58	....	1	....	.....	18	.....	18	
	do ..... " 2	69	20	1	90	48	138	181	90	88	3	....	.....	.....	18	.....	18	
	do ..... " 3	103	3	2	108	40	148	181	108	71	1	1	.....	.....	18	.....	18	
	do ..... " 4	63	3	.....	66	39	105	181	66	115	....	....	.....	.....	18	.....	18	4411
	do ..... " 5	51	20	2	73	52	125	181	73	107	1	....	.....	.....	18	.....	18	
	do ..... " 6	51	26	1	78	61	139	180	78	101	1	....	.....	.....	18	.....	18	
	do ..... " 7	493 — 50	93 — 6	6 — 0	56	17	73	180	56	124	....	....	.....	.....	18	.....	18	
	Osgoode ..... " 1	36	26	.....	62	69	131	170	62	107	1	....	.....	.....	18	.....	18	
	do ..... " 2	72	4	2	78	59	137	180	78	102	....	....	.....	.....	18	....	18	
	do ..... " 3	32	57	2	91	67	158	180	91	88	1	....	.....	.....	18	.....	18	
	do ..... " 4	54	55	1	110	48	158	180	110	70	....	....	.....	.....	18	.....	18	
	do ..... " 5	69	68	1	138	43	181	181	138	43	....	....	.....	.....	18	.....	18	4753
	do ..... " 6	29	70	1	100	59	159	181	100	74	7	....	.....	.....	18	1	17	
	do ..... " 7	70	55	.....	125	100	225	180	125	55	....	....	.....	.....	18	.....	18	
	do ..... " 8	423 — 61	350 — 15	7 — 0	76	26	102	181	76	105	....	....	.....	.....	18	.....	18	
	Gloucester. ..... " 1	69	30	1	100	75	175	181	100	78	3	....	.....	.....	18	7	11	
	do ..... " 2	31	53	2	86	71	157	181	86	93	....	2	.....	.....	18	.....	18	
	do ..... " 3	26	76	.....	102	145	247	181	102	77	1	1	.....	.....	18	.....	18	



RETURN from the Records of the General Election to the Legislative Assembly in 1886, etc.—*Continued.*

Electoral District.	Names and Numbers of Polling Sub-Divisions.	Names of Candidates and No. of Votes Polled for each.		Voters in each Sub-Division.			Ballot Papers sent out, and how Disposed of in each Sub-Division.							Tendered Ballot Papers sent out and how disposed of in each Sub-Division.			Population in each Constituency, as shewn by last Census.
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		Drury.	Clarke.														
Simcoe, E. R. —*Continued.*	Town of Orillia.... " 1	88	77	165	128	293	298	165	130	1	2	.....	.....	20	2	18	
	do .... " 2	110	119	229	123	352	358	229	127	2	....	.....	.....	20	.....	20	2910
	do .... " 3	281— 83	309—113	196	92	288	292	196	96	....	....	.....	.....	20	.....	20	
	Totals.....	1805 1591	1591	3396	2043	5439	5610	3366	2195	20	9	.....	.....	660	28	632	20382
	Majority for Drury....	214															
		Wylie.	Frame.														
Simcoe, W. R.	Collingwood.....No. 1	75	61	136	115	251	202	136	65	1	....	.....	.....	25	1	24	
	do ..... " 2	65	60	125	76	201	182	125	56	....	....	1	.....	25	.....	25	
	do ..... " 3	30	27	57	65	122	172	57	114	....	1	.....	.....	25	2	23	
	do ..... " 4	53	62	115	124	239	200	115	83	....	2	.....	.....	25	3	22	4445
	do ..... " 5	52	64	116	111	227	198	116	82	....	....	.....	.....	25	.....	25	
	do ..... " 6	344— 69	339— 65	134	101	235	202	134	66	....	2	.....	.....	27	.....	27	
	Nottawasaga ..... " 1	72	58	130	65	195	156	130	25	....	1	.....	.....	26	3	23	
	do ..... " 2	82	49	131	56	187	230	131	99	....	....	.....	.....	25	2	23	
	do ..... " 3	61	50	111	80	191	200	111	89	....	....	.....	.....	25	5	20	
	do ..... " 4	71	38	109	74	183	150	109	41	....	....	.....	.....	25	.....	25	
	do ..... " 5	54	53	107	56	163	201	107	92	2	....	.....	.....	25	.....	25	6971
	do ..... " 6	56	53	109	65	174	172	109	63	....	....	.....	.....	25	.....	25	
	do ..... " 7	64	72	136	53	189	198	136	62	....	....	.....	.....	25	.....	25	
	do ..... " 8	516— 56	440— 67	123	66	189	201	123	76	2	....	.....	.....	25	.....	25	

RETURN from the Records of the General Election to the Legislative Assembly in 1886, etc.—*Continued.*

Electoral District.	Names and Numbers of Polling Sub-Divisions.	Names of Candidates and No. of Votes Polled for each.						Voters in each Sub-Division.			Ballot Papers sent out, and how disposed of in each Sub-Division.							Tendered Ballot Papers sent out and how disposed of in each Sub-Division.			Population in each Constituency, as shewn by last Census.
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Toronto.	St. Andrew . No. 1	48	45	31	8	5		1535	1825	3360	200	78	122	...	....	....	.....	30	1	29	11447
	do " 2	54	51	41	23	22					200	106	91	3	...	.....	.....	30	1	29	
	do " 3	48	43	18	20	13					200	77	123	1	...	.....	.....	30	4	26	
	do " 4	35	28	31	22	15					200	73	126	1	...	.....	.....	30	4	26	
	do " 5	20	19	22	30	17					200	50	150	...	...	.....	.....	30	1	29	
	do " 6	31	25	25	19	15					200	65	132	3	...	.....	.....	30	2	28	
	do " 7	41	44	20	19	21					200	80	120	..	...	.....	.....	30	2	28	
	do " 8	46	44	25	25	23					200	88	110	2	...	.....	.....	30	1	29	
	do " 9	31	27	14	15	9					200	53	147	...	...	.....	.....	30	2	28	
	do " 10	53	51	31	22	23					200	104	91	5	...	.....	.....	30	2	28	
	do " 11	42	37	12	32	29					200	79	120	1	...	.....	.....	30	....	30	
	do " 12	40	39	33	38	35					200	100	99	1	...	.....	.....	30	1	29	
	do " 13	42	41	31	18	19					200	90	108	2	...	.....	.....	30	1	29	
	do " 14	25	22	26	33	23					200	70	129	1	...	.....	.....	30	....	30	
	do " 15	25	28	39	53	41					200	105	94	...	1	.....	.....	30	....	30	
	do " 16	32	36	19	43	41					200	97	98	5	...	.....	.....	30	....	30	
	do " 17	35	37	31	69	66					200	126	73	1	...	.....	.....	30	1	29	
	do " 18	678—30	651—34	476—27	529—40	458—41					200	94	105	...	1	.....	.....	30	3	27	
	St. David . . . " 1	73	70	35	27	21					200	124	75	1	....	.....	.....	30	2	28	
	do " 2	39	37	32	35	21					200	93	106	1	...	.....	.....	30	....	30	
	do " 3	25	27	32	31	16					200	76	111	12	1	.....	.....	30	4	26	
	do " 4	64	56	46	34	15					200	120	78	2	....	.....	.....	30	....	30	

RETURN from the Records of the General Election to the Legislative Assembly in 1886, etc.—*Continued.*

Electoral District.	Names and Numbers of Polling Sub-Divisions.	Names of Candidates and No. of Votes Polled for Each.					Voters in each Sub-Division.			Ballot Papers sent out, and how Disposed of in each Sub-Division.							Tendered Ballot Papers sent out and how disposed of in each Sub-Division.			Population in each Constituency, as shewn by last Census.
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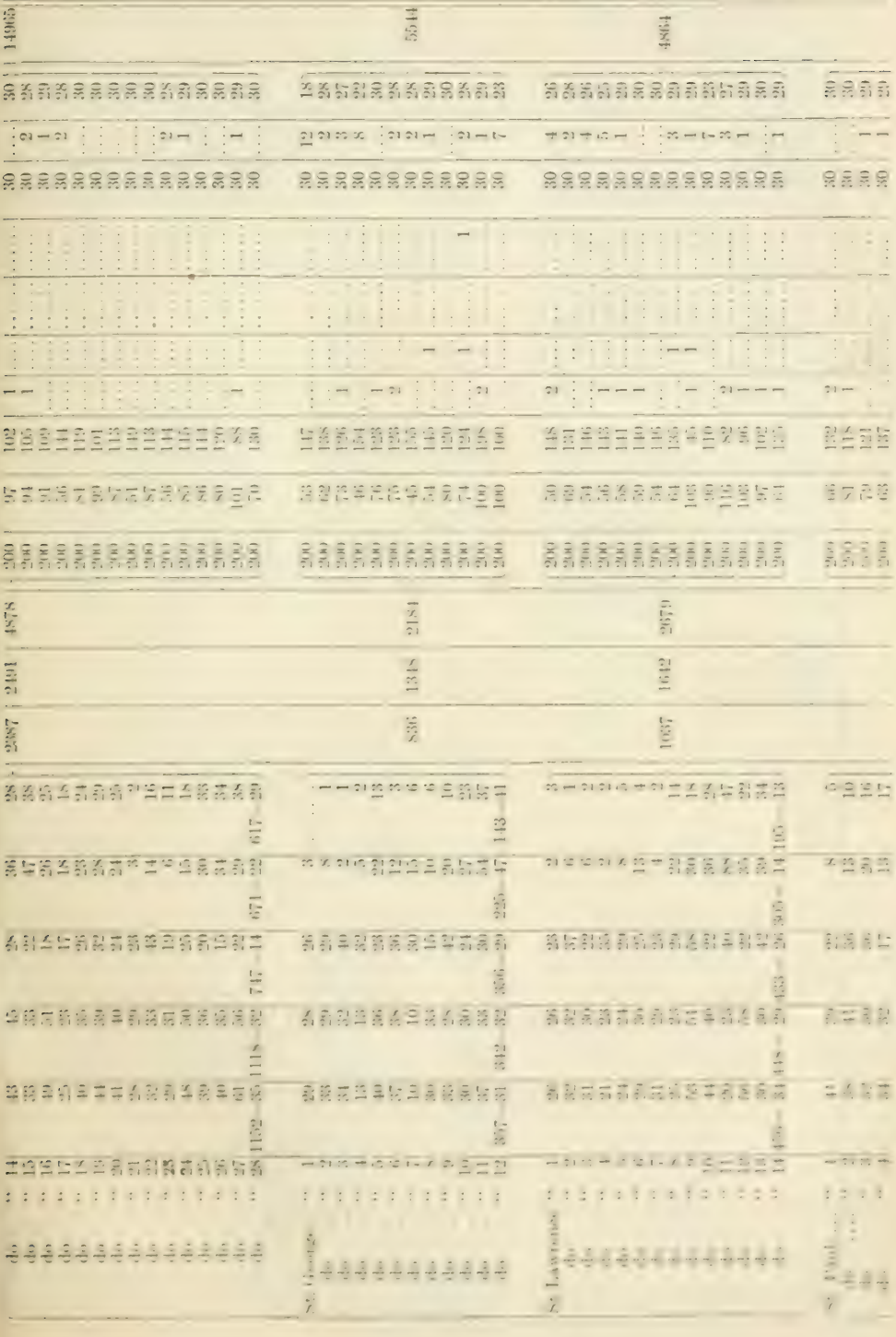
Toronto.	St. John... No. 10	42	39	21	31	28	1588	1560	3148	200	85	115	....	....	.....	.....	30	1	29	12192
	do ... " 11	28	31	11	28	20				200	62	138	....	....	.....	.....	30	1	29	
	do .... " 12	53	49	9	26	25				200	84	112	1	2	.....	.....	30	....	30	
	do .... " 13	27	24	15	24	23				200	61	135	2	2	.....	.....	30	....	30	
	do .... " 14	48	44	23	16	14				200	81	119	....	....	.....	.....	30	2	28	
	do .... " 15	39	36	58	15	10				200	101	97	....	2	.....	.....	30	1	29	
	do .... " 16	36	39	37	9	6				200	79	120	....	1	.....	.....	30	1	29	
	do ... " 17	44	53	48	21	19				200	109	91	....	....	.....	.....	30	....	30	
	do .... " 18	795—33	764—34	504—55	412—21	359— 7				200	96	102	2	....	.....	.....	30	....	30	
	St. Patricks. " 1	55	55	37	35	21				200	111	87	2	....	.....	.....	30	2	28	
	do " 2	41	35	26	60	37				200	112	87	....	....	1	.....	30	....	30	
	do " 3	36	34	42	16	10				200	83	113	....	4	.....	.....	30	....	30	
	do " 4	46	44	20	23	18				200	79	121	....	....	.....	....	30	....	30	
	do " 5	44	41	39	27	27				200	99	101	....	....	.....	.....	30	....	30	
	do " 6	49	54	36	26	22				200	103	97	....	....	.....	.....	30	....	30	
	do " 7	43	39	24	12	12				200	75	122	....	3	.....	.....	30	....	30	
	do " 8	55	50	44	14	10				200	103	97	....	....	.....	.....	30	....	30	
	do " 9	33	33	41	15	10				200	80	120	....	....	.....	.....	30	...	30	
	do " 10	42	42	25	13	11				200	77	122	1	....	.....	....	30	2	28	
	do " 11	42	46	24	22	15				200	82	118	....	....	.....	.....	30	....	30	
	do " 12	40	43	22	33	36				200	92	108	....	....	.....	.....	30	....	30	
	do " 13	39	34	19	20	20				200	70	129	....	1	.....	.....	30	1	29	



RETURN from the Records of the General Election to the Legislative Assembly in 1886, etc.—*Continued.*

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Toronto, *Con.*	St. Paul.... " 5	39	41	43	17	10		679	844	1523	200	64	134	2	....	.....	.....	.....	30	....	30	4825
	do .... " 6	36	34	14	21	17					200	64	134	....	....	.....	.....	.....	30	....	30	
	do .... " 7	23	24	19	27	25					200	63	137	....	....	.....	.....	.....	30	1	29	
	do ... " 8	21	20	38	18	17					200	71	127	2	....	.....	.....	.....	30	....	30	
	do .... " 9	29	29	32	14	13					200	71	129	....	....	.....	.....	.....	30	3	27	
	do ... " 10	19	19	32	14	10					200	57	143	....	....	.....	.....	.....	30	....	30	
		312—	309—	289—	165—	140—																
St. Thomas.	" 1	21	25	40	23	7		1127	1210	2337	200	67	131	1	....	1	.....	.....	30	3	27	8931
do	" 2	30	28	21	24	14					200	65	135	....	....	.....	.....	.....	30	....	30	
do	" 3	41	39	29	25	12					200	79	118	....	3	.....	.....	.....	30	1	29	
do	" 4	31	28	22	10	11					200	102	93	2	3	.....	.....	.....	30	3	27	
do	" 5	29	32	40	11	10					200	73	126	....	1	.....	.....	.....	30	....	30	
do	" 6	36	37	50	8	7					200	90	109	1	....	.....	.....	.....	30	2	28	
do	" 7	38	35	41	32	19					200	95	104	1	....	.....	.....	.....	30	1	29	
do	" 8	32	32	44	5	6					200	79	121	....	....	.....	.....	.....	30	....	30	
do	" 9	52	48	40	20	14					200	100	94	5	1	.....	.....	.....	30	....	30	
do	" 10	42	43	47	10	7					200	91	107	....	2	.....	.....	.....	30	....	30	
do	" 11	37	37	46	10	5					200	85	115	....	....	.....	.....	.....	30	1	29	
do	" 12	41	42	45	6	5					200	89	111	....	....	.....	.....	.....	30	2	28	
do	" 13	43	44	22	14	7					200	72	129	....	....	.....	.....	.....	30	4	26	
do	" 14	491—	489—	507—	203—	127—					200	40	159	....	1	.....	.....	.....	30	....	30	
				20	5	3																

| St. Stephen, No. | | |

RETURN from the Records of the General Election to the Legislative Assembly in 1886, etc.—*Continued.*

Electoral District.	Names and Numbers of Polling Sub-Divisions.	Names of Candidates and No. of Votes Polled for Each.		Voters in each Sub-Division.			Ballot Papers sent out, and how Disposed of in each Sub-Division.							Tendered Ballot Papers sent out and how disposed of in each Sub-Division.			Population in each Constituency, as shewn by last Census.
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		Fell.	Bick.														
Victoria, E.R.	Emily ..... No. 1	111	39	150	60	210	225	150	73	....	2	.....	.....	17	1	16	
	do ..... " 2	87	30	117	78	195	200	117	82	....	1	.....	.....	17	.....	17	2876
	do ..... " 3	15	120	135	130	265	275	135	138	....	2	.....	.....	17	....	17	
	do ..... " 3	248— 35	203— 14	49	33	82	100	49	51	....	....	.....	.....	17	.....	17	
	Omemee	105 - 105	22— 22	127	77	204	225	127	97	1	....	.....	....	17	.....	17	744
	Verulam ..... No. 1	48	13	61	14	75	100	61	38	....	1	.....	.....	17	.....	17	
	do ..... " 2	46	29	75	31	106	125	75	45	4	1	.....	.....	17	.....	17	
	do ..... " 3	31	66	97	18	115	125	97	28	....	....	.....	.....	17	1	16	2474
	do ..... " 4	53	21	74	12	86	100	74	26	....	....	.....	.....	17	.....	17	
	do ..... " 5	220— 42	187— 58	100	39	139	150	100	48	2	....	.....	....	17	.....	17	
	Bobcaygeon ..... " 1	57	36	93	36	129	150	93	57	....	....	.....	.....	17	.....	17	
	do ..... " 2	96— 39	62— 26	65	35	100	125	65	59	1	....	.....	.....	17	1	16	750
	Fenelon ..... " 1	25	18	43	14	57	75	43	28	2	2	.....	.....	17	....	17	
	do ..... " 2	72	55	127	34	161	200	127	73	....	....	.....	.....	17	.....	17	
	do ..... " 3	43	73	116	26	142	150	116	34	....	....	.....	.....	17	.....	17	3094
	do ..... " 4	52	38	90	23	113	125	90	35	....	....	.....	.....	17	.....	17	
	do ..... " 5	247— 55	236— 52	107	50	157	175	107	68	....	....	.....	.....	17	.....	17	
	Fenelon Falls ..... " 1	64	50	114	52	166	200	114	85	....	1	.....	.....	17	.....	17	
	do ..... " 2	115— 51	97 — 47	98	59	157	175	98	74	2	1	.....	.....	17	.....	17	1155
	Somerville ..... " 1	65	26	91	21	112	125	91	34	....	....	.....	.....	17	.....	17	
	do ..... " 2	54	30	84	23	107	125	84	41	....	....	.....	.....	17	.....	17	1509
	do ..... " 3	173— 54	86 — 30	84	31	115	125	84	41	....	....	.....	.....	17	2	15	
	Bexley ..... " 1	27	11	38	22	60	75	38	36	1	....	.....	.....	17	11	6	
	do ..... " 2	84 — 57	32 — 21	78	46	124	125	78	45	2	....	.....	....	17	2	15	903
	Laxton Digby	59— 59	33— 33	92	43	135	150	92	58	....	....	.....	.....	17	6	11	957
	Lutterworth	39— 39	54— 54	93	36	129	150	93	56	1	....	.....	.....	17	1	16	586
	Anson Hinden	37— 37	11— 11	48	54	102	125	48	74	2	1	.....	.....	17	3	14	371
	Snowden ..... No. 1	41	52	93	44	137	150	93	53	...	4	.....	.....	17	1	16	
	do ..... " 2	52— 11	75— 23	34	12	46	50	34	15	....	1	.....	.....	17	.....	17	807
	Minden	72— 72	118—118	190	102	292	300	190	108	1	1	.....	.....	17	.....	17	497

Stanhope, etc	No. 1	8	8	29	25	54	75	29	46	....	....	....	....	36	....	36	551
do	" 2	29— 21	29— 21	29	31	60	76	29	45	....	1	....	....	35	1	34	
Glamorgan		49— 49	23— 23	72	67	129	150	72	77	....	1	....	....	17	....	17	476
Dysart, etc	No. 1	55	66	121	36	157	175	121	54	....	....	....	....	17	2	15	1087
do	" 2	1	3	4	2	6	50	4	46	....	....	....	....	17	....	17	
do	" 3	58— 2	81— 12	14	9	23	50	14	36	....	....	....	....	17	....	17	
Minnemink		14— 14	12— 12	26	16	42	50	26	24	....	....	....	....	17	17	....	426
Carnarvon	No. 1	15	16	31	32	63	75	31	44	....	....	....	....	17	....	17	497
do	" 2	36— 21	48— 32	53	27	80	100	53	47	....	....	....	....	17	....	17	
Totals		1733	1409	3142	1490	4632	5300	3142	2119	19	20	....	....	700	49	651	19760
		1409															
Majority for Fell		324															
Victoria, W. R.		Cruess.	McIntyre.														
Ops Township	No. 1	26	96	122	66	188	200	122	77	1	....	....	....	20	2	18	
do	" 2	78	49	122	63	185	200	122	77	....	1	....	....	20	1	19	
do	" 3	53	57	110	71	181	200	110	89	....	1	....	....	20	2	18	3358
do	" 4	39	79	118	63	181	200	118	78	1	3	....	....	20	2	18	
do	" 5	265— 74	322— 41	115	38	153	200	115	84	1	....	....	....	20	1	19	
Mariposa Township	" 1	74	66	140	40	180	200	140	60	....	....	....	....	25	....	25	
do	" 2	70	25	95	36	131	200	95	104	1	....	....	....	25	8	17	
do	" 3	61	74	135	53	188	200	135	65	....	....	....	....	25	....	25	
do	" 4	69	72	141	32	173	200	143	59	....	....	....	....	25	....	25	
do	" 5	31	85	116	61	177	200	116	83	1	....	....	....	25	....	25	5531
do	" 6	52	46	98	47	145	200	98	101	....	1	....	....	25	....	25	
do	" 7	51	74	125	53	178	200	125	75	....	....	....	....	25	....	25	
do	" 8	443— 35	453— 11	46	25	71	200	46	153	....	1	....	....	25	3	22	
Eldon Township	" 1	65	56	121	68	189	200	121	79	....	....	....	....	17	....	17	
do	" 2	93	57	150	54	204	400	150	248	2	....	....	....	17	....	17	
do	" 3	90	46	136	45	181	200	136	63	....	1	....	....	17	3	14	3778
do	" 4	334— 86	184— 25	111	57	168	200	111	87	2	....	....	....	17	2	15	
Woodville		30— 30	43— 43	73	48	121	200	73	125	2	....	....	....	17	....	17*	
Garden and Dalton	No. 1	45	70	115	76	191	200	115	85	....	....	....	....	17	....	17	916
do	" 2	87— 42	81— 11	53	54	107	200	53	147	....	....	....	....	16	1	15	930
Lindsay, N. Ward	" 1	36	24	60	39	99	200	60	139	..	1	....	....	20	1	19	
do do	" 2	36	45	81	67	148	200	81	118	1	....	....	....	20	..	20	
do do	" 3	43	43	86	51	137	200	86	113	....	1	....	....	20	1	19	
do S. Ward	" 1	58	47	105	75	180	200	105	92	....	3	....	....	20	1	19	
do do	" 2	17	38	55	52	107	200	55	144	1	..	....	....	20	..	20	5080
do do	" 3	34	54	88	63	151	200	88	111	....	1	....	....	20	1	19	
do E. Ward	" 1	19	31	50	40	90	200	50	150	....	....	....	....	20	....	20	
do do	" 2	278— 36	345— 63	99	46	145	200	99	100	....	1	....	....	20	....	20	
Totals		1488	1428	2866	1483	4349	5800	2866	2906	13	15	....	....	578	29	449	19593
		1428															
Majority for Cruess		10															

* In 1881 Census Returns Population of the Village of Woodville, included part in Mariposa and part in Eldon.

RETURN from the Records of the General Election to the Legislative Assembly in 1886, etc.—*Continued.*

Electoral District.	Names and Numbers of Polling Sub-Divisions.	Names of Candidates and No. of Votes Polled for Each.			Voters in each Sub-Division.			Ballot Papers sent out, and how Disposed of in each Sub-Division.							Tendered Ballot Papers sent out and how disposed of in each Sub-Division.			Population in each Constituency, as shewn by last Census.
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Waterloo, N. R.....	... .	Snider by Acclamation.....			.. ..	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	20986
Waterloo, S. R			Masters.	Holwell.														
	Waterloo, South...	No. 1	139	52	.....	.....	.....	279	.....	.....	.....	.....	.....	.....	.....	.....	.....	4004
	do ...	" 2	100	65	.....	.....	.....	260	.....	.....	.....	.....	.....	.....	.....	.....	.....	
	do ...	" 3	87	78	.....	.....	.....	220	.....	.....	.....	.....	.....	.....	.....	.....	.....	
	do ...	" 4	405— 79	262— 67	.. ..	.....	....	210	.....	.....	.....	.....	.....	.....	.....	.....	.....	
	Wilmot.....	" 1	117	49	.....	.....	....	225	.....	.....	.....	.....	.....	.....	.....	.....	.....	5358
	do	" 2	111	35	.....	.....	.....	190	.....	.....	.....	.....	.....	.....	.....	.....	.....	
	do	" 3	54	99	.... ..	.....	.....	200	.....	.....	.....	.....	.....	.....	.....	.....	.....	
	do	" 4	95	76	.....	....	.....	230	.....	.....	.....	.....	.....	.....	.....	.....	.....	
	do	" 5	29	110	.....	.....	.....	200	.....	.....	.....	.....	.....	.....	.....	.....	.....	
	do	" 6	449— 43	456— 81	.....	. ..	.....	170	.....	.....	.....	.....	.....	.....	.....	.....	.....	
	North Dunfries....	" 1	39	22	.....	.....	.....	100	.....	.....	.....	.....	.....	.....	.....	.....	.....	3848
	do	" 2	95	26	.....	.....	.....	200	.....	.....	.....	.....	.....	.....	.....	.....	.....	
	do	" 3	111	30	.....	.....	.....	210	.....	.....	.....	.....	.....	.....	.....	.....	.....	
	do	" 4	77	15	.....	.....	.....	180	.....	.....	.....	.....	.....	.....	.....	.....	.....	
	do	" 5	425—103	116— 23	.....	.. ..	.....	200	.....	.....	.....	.....	.....	.....	.....	.....	.....	
	Galt	" 1	64	64	.. ..	.....	.....	200	.....	.....	.....	.....	.....	.....	.....	.....	.....	5187
	do	" 2	86	68	.....	.....	.....	260	.....	....	..	.....	.....	.....	.....	.....	.....	
	do	" 3	54	41	.....	.....	.....	210	.....	.....	..	.....	.....	.....	.....	.....	.....	
	do	" 4	38	44	... ..	.....	.....	120	.....	.....	.....	.....	.....	.....	.....	.....	.....	
	do	" 5	64	45	.. ...	.....	.....	140	....	....	....	.....	.....	.....	.....	.....	.....	
	do	" 6	110	50	.....	.....	.....	220	.....	.....	.....	.....	.....	.....	.....	.....	.....	
	do	" 7	53	89	.....	.....	.....	140	....	....	.....	.....	.....	.....	.....	.....	.....	
	do	" 8	44	54	.....	.....	.....	155	....	....	.....	.....	.....	.....	.....	.....	.....	
	do	" 9	78	54	.....	.....	.....	190	.....	...	.....	.....	.....	.....	.....	.....	.....	
	do	" 10	698—107	503— 44	.....	.....	.....	215	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Preston	..	1		26		125					200										1419
do	..	2	51	25	259	134					220										
New Hamburg	..	1		44		128					210										1240
do	..	2	70	26	178	50					100										
Hespeler			96	36	104	104					270										698
Ayr	No.	1		82		11					150										
do	..	2	159	77	32	21					120										
Totals				2363		1904					6185										
				1904																	
Majority for Masters				449																	

*N. B. This return is not complete; it was sent back to the Returning Officer, but he refused to amend. The votes polled count up as appears, but the Returning Officer's official return was—Masters, 2361; Hodwell, 1904; Majority for Masters, 457.

			Morin.		Fraser.															
Welland	Bertie	No.	1	68		46	114	58	172	200	114	85	1				20	1	19	
	do	..	2	78		19	97	45	142	175	97	77		1			20		20	
	do	..	3	90		29	119	40	159	200	119	81					20		20	
	do	..	4	79		52	131	59	190	225	131	93		1			20		20	3986
	do	..	5	45		41	86	35	119	150	84	61	3				20		20	
	do	..	6	115		30	145	46	191	225	145	78	3	0	1		20		20	
	do	..	7	508	35	263	81	29	110	130	81	48	0	1			20		20	
	do	..	8	97		70	167	76	243	276	167	107	1				20	1	19	
Crowland		..	2	149	52	118	140	56	196	160	100	60					20		20	1318
do				97	48	73	110	64	174	200	110	90					20	2	18	664
Calfaxawa				62	62	46	108	85	193	225	108	117					20		20	722
Port Erie							104	148	46	194	225	148	74	1	2		20		20	
Humberstone		No.	1	44				129	67	196	225	129	95		2	1	20	1	19	
do		..	2	70				126	49	175	200	126	72	1			20	2	18	4182
do		..	3	68				117	54	171	200	117	83				20		20	
do		..	4	198	21	322	96	144	101	245	275	144	109	1	1		20	2	18	
Niagara Falls Town		N		78			66	181	101	282	300	181	126		3		20		20	
do		E		98			83	108	57	165	185	108	76	1			20	1	19	2347
do		W		80			28	62	75	137	170	62	106		2		20	1	19	
do		S		294	58	201	24	178	53	231	250	178	72				20		20	
Niagara Falls Village				39	39	79	79	126	41	167	199	126	60	1	3		20		20	
Fort Colborne		No.	1	54			72	101	53	154	180	101	78	1			20		20	1716
do		..	2	118	64	109	87	139	65	204	230	139	91				20		20	
Stamford		..	1	62			47	91	64	155	180	91	87			2	20	1	19	
do		..	2	89			86	130	92	222	250	130	118	2			20	1	19	3162
do		..	3	202	76	158	55	98	22	120	150	98	52				20		20	
Pinnahl Township		..	1	30			68	104	49	153	185	104	80		1		20		20	
do		..	2	49			55	137	57	194	225	137	87	1			20		20	2456
do		..	3	80			57	128	40	168	200	128	70	2			20	1	19	
do		..	4	201	42	266	86	163	55	218	250	163	86		1		20		20	
Pinnahl Tp.	St. George			59			113	104	71	175	200	104	96	1			20		20	
do	St. Andrew			44			60	111	75	186	220	111	107		2		20		20	2456
do	St. Patrick			74			37	114	66	180	201	114	86	1			20	2	18	
do	St. David			224	58	168	58	117	41	158	200	117	82	1			20		20	
Willoughby		No.	1	68			51	193	61	152	200	103	97				20		20	1273
do		..	2	134	65	89	38													

RETURN from the Records of the General Election to the Legislative Assembly in 1886, etc.—*Continued.*

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		Morin.	Fraser.														
	Welland Ward .... " 1	49	44	93	40	133	150	93	55	2	....	.....	.....	25	.....	25	
	do .... " 2	63	49	112	48	160	199	112	87	....	....	.....	.....	25	3	22	1870
	do .... " 3	56	46	102	55	157	201	102	86	1	2	.....	.....	25	.....	25	
	do .... " 4	239— 71	177— 38	109	39	148	184	109	72	2	1	.....	.....	25	.....	25	
	Totals.....	2462 2169	2169	4631	2188	6819	7999	4631	3315	28	23	2	.....	800	19	781	26152
	Majority for Morin....	293															
		Guthrie.	Raymond.														
Wellington, S. R..	Guelph City .....No. 1	49	58	107	109	216	250	107	139	3	1	.....	.....	25	.....	25	
	do ..... " 2	88	57	145	92	237	250	145	103	....	2	.....	.....	25	...	25	
	do ..... " 3	79	111	190	187	377	250	190	57	....	3	.....	.....	25	2	23	
	do ..... " 4	67	77	144	100	244	250	144	103	3	....	.....	.....	25	.....	25	
	do ... " 5	45	79	124	89	211	250	124	123	....	3	.....	.....	25	.....	25	
	do ..... " 6	53	51	104	73	177	250	104	145	1	....	.....	.....	25	1	24	
	do .... " 7	52	60	112	73	187	250	112	135	1	2	.....	.....	25	2	23	9890
	do ..... " 8	65	52	117	93	210	250	117	131	2	....	.....	.....	25	.....	25	
	do ..... " 9	68	82	150	113	263	250	150	99	1	....	.....	.....	25	.....	25	
	do ..... " 10	76	76	152	91	243	250	152	98	....	....	.....	.....	25	.....	25	
	do ..... " 11	79	64	143	101	244	250	143	97	9	1	.....	.....	25	.....	25	
	do ..... " 12	792 - 71	828— 61	132	80	212	250	132	115	1	2	.....	.....	25	....	25	
	Guelph Township.. " 1	105	31	136	59	195	250	136	113	....	1	.....	.....	25	.....	25	
	do .. " 2	68	52	120	61	181	250	120	129	....	1	.....	.....	25	.....	25	2793
	do .. " 3	51	57	108	33	141	250	108	142	....	....	.....	.....	25	...	25	
	do .. " 4	282— 58	195— 55	113	73	186	250	113	134	1	2	...	.....	25	3	22	

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RETURN from the Records of the General Election to the Legislative Assembly in 1886, etc.—*Continued.*

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W. Wellington—*Con.*		Allan.	McGowan.														
	do ..... " 4	34	18	52	56	108	100	52	46	2	....	.....	.....	5	.....	5	
	do ..... " 5	158— 39	105— 22	61	57	118	100	61	39	....	....	.....	.....	5	.....	5	
	Palmerston North.....	43	43	86	65	151	125	86	38	1	....	.....	.....	5	.....	5	
	do East	42	46	88	72	160	125	88	37	....	....	.....	.....	5	.....	5	536
	do West.....	112— 27	138— 49	76	75	151	175	76	99	....	....	.....	.....	5	2	3	
	Totals.....	1633 1336	1336	2969	1776	4745	4525	2969	1535	21	....	.....	.....	160	9	151	18892
	Majority for Allan ...	297															
Wentworth, N.R.—*Con.*		McMahon.	Brown.														
	Dundas, Canal Ward....	52	53	105	56	161	249	105	144	....	....	.....	.....	25	1	24	
	do Mountain Ward.	67	55	122	74	196	250	122	123	5	....	.....	.....	25	.....	25	
	do Foundry Ward.	77	48	125	83	208	250	125	123	....	1	1	.....	25	1	24	3709
	do Valley Ward...	281—85	243—87	172	75	247	250	172	76	2	....	.....	.....	25	.....	25	
	Beverly .....No. 1	99	18	117	66	183	250	117	133	....	....	.....	.....	25	1	24	
	do ..... " 2	56	26	82	61	143	250	82	167	....	1	.....	.....	25	1	24	
	do ..... " 3	82	61	143	65	208	250	143	107	....	....	.....	.....	25	.....	25	
	do ..... " 4	48	39	87	21	108	251	87	162	1	1	.....	.....	25	.....	25	
	do ..... " 5	58	24	82	38	120	250	82	168	....	....	.....	.....	25	.....	25	5230
	do ..... " 6	46	5	51	28	79	250	51	199	....	....	.....	.....	25	.....	25	
	do ..... " 7	66	31	97	27	124	250	97	151	....	2	.....	.....	25	.....	25	
	do ..... " 8	72	12	84	39	123	250	84	166	....	....	.....	.....	25	.....	25	
	do ..... " 9	572—45	235—19	64	37	101	250	64	185	....	1	.....	.....	25	2	23	
	West Flamboro.... " 1	70	26	96	38	134	250	96	154	....	....	.....	.....	25	.....	25	
	do .... " 2	54	42	96	74	170	250	96	154	....	....	.....	.....	25	.....	25	

RETURN from the Records of the General Election to the Legislative Assembly in 1886, etc.—*Continued.*

Electoral District.	Names and Numbers of Polling Sub-Division.	Names of Candidates and No. of Votes Polled for each.		Voters in each Sub-Division.			Ballot Papers sent out, and how disposed of in each Sub-Division.							Tendered Ballot Papers sent out and how disposed of in each Sub-Division.			Population in each Constituency, as shewn by last Census.
				Total No. of Votes Polled.	No. of Votes remaining Unpolled.	No. of Names on the Voters' Lists.	No. of Ballot Papers sent out to each Sub-Division.	Used Ballot Papers.	Unused Ballot Papers.	Rejected Ballot Papers.	Spoiled Ballot Papers.	Ballot Papers given to Voters who afterwards declined to Vote.	Ballot Papers taken from Polling Places.	No. of Tendered Ballots sent out to each Sub-division.	Used.	Unused.	
		Smith.	Crosby.														
York, E. R.	Markham ..... No. 1	66	39	105	52	157	300	105	194	....	1	.....	.....	30	2	28	
	do ..... " 2	53	20	73	60	133	300	73	224	1	2	.....	.....	30	.....	30	
	do ..... " 3	45	35	80	58	138	300	80	219	1	....	.....	.....	30	.....	30	
	do ..... " 4	59	60	119	75	194	300	119	175	5	1	....	.....	30	.....	30	
	do ..... " 5	76	73	149	72	221	300	149	139	11	1	.....	.....	30	.....	30	
	do ..... " 6	71	42	113	47	160	300	113	185	2	....	.....	.....	30	1	29	6375
	do ..... " 7	55	15	70	72	142	300	70	230	....	....	.....	.....	30	.....	30	
	do ..... " 8	88	34	122	78	200	300	122	172	4	2	.....	.....	30	.....	30	
	do ..... " 9	82	20	102	44	146	300	102	198	....	....	.....	.....	30	2	28	
	do ..... " 10	664— 69	357— 19	88	50	138	300	88	212	....	....	.....	.....	30	.....	30	
	York ..... " 1	33	9	42	130	172	300	42	254	2	2	.....	.....	30	3	27	
	do ..... " 2	45	23	68	49	117	300	68	231	....	1	.....	.....	30	.....	30	
	do ..... " 3	56	42	98	121	219	300	98	199	1	2	.....	.....	30	11	19	
	do ..... " 4	32	16	48	163	211	250	48	202	....	....	.....	.....	30	.....	30	6491
	do ..... " 5	41	13	54	119	173	300	54	245	1	....	.....	.....	30	.....	30	
	do ..... " 6	24	21	45	43	88	300	45	255	....	....	.....	.....	30	.....	30	
	do ..... " 7	284— 53	145— 21	74	60	134	300	74	226	....	....	.....	.....	30	.....	30	
	Scarboro' ..... " 1	65	47	112	90	202	300	112	186	2	....	.....	.....	30	.....	30	
	do ..... " 2	66	44	110	117	227	300	110	190	....	....	.....	.....	30	.....	30	
	do ..... " 3	115	64	179	85	264	300	179	120	1	....	.....	.....	30	.....	30	4208
	do ..... " 4	89	56	145	62	207	250	145	105	....	....	.....	.....	30	.....	30	
	do ..... " 5	414— 79	235— 24	103	48	151	300	103	194	2	1	.....	.....	30	.....	30	
	Markham village .. " 1	73	41	114	47	161	300	114	185	1	....	.....	.....	30	1	29	
	do .. " 2	104 — 31	68— 27	58	55	113	250	58	191	1	....	.....	.....	30	.....	30	954
	Stouffville	65— 65	13— 13	78	62	140	300	78	222	....	....	.....	.....	30	.....	30	459
	Richmond Hill	102—102	50— 50	152	77	229	300	152	148	....	....	.....	.....	30	.....	30	867
	Totals	1633 868	868	2501	1936	4437	7750	2501	5101	35	13	.....	.....	780	20	760	19354
	Majority for Smith ...	765															

RETURN from the Records of the General Election to the Legislative Assembly in 1886, etc.—*Continued.*

Electoral District.	Names and Numbers of Polling Sub-Divisions.	Names of Candidates and No. of Votes Polled for Each.		Votes in each Sub-Division.			Ballot Papers sent out, and how Disposed of in each Sub-Division.							Tendered Ballot Papers sent out and how disposed of in each Sub-Division.			Population in each Constituency, as shewn by last Census.
				Total No. of Votes Polled.	No. of Votes remaining Unpolled.	No. of Names on the Voters' Lists.	No. of Ballot Papers sent out to each Sub-Division.	Used Ballot Papers.	Unused Ballot Papers.	Rejected Ballot Papers.	Spoiled Ballot Papers.	Ballot Papers given to Voters who afterwards declined to Vote.	Ballot Papers taken from Polling Places.	No. of Tendered Ballots sent out to each Sub-Division.	Used.	Unused.	
		Widdifield.	Wyndham.														
York, N.R.—*Continued.*	East Gwillinbury..No. 1	63	31	94	94	188	200	94	106	....	....	.....	.....	20	.....	20	
	do .. " 2	81	15	96	74	170	199	96	102	1	....	.....	.....	20	.....	20	
	do .. " 3	79	38	117	64	181	200	117	82	....	1	.....	.....	20	.....	20	
	do .. " 4	56	35	91	92	183	199	91	108	....	....	.....	.....	20	.....	20	4143
	do .. " 5	59	28	87	104	191	200	87	106	6	1	.....	.....	20	1	19	
	do .. " 6	395— 57	186— 39	96	110	206	250	96	154	....	....	.....	.....	20	.....	20	
	North Gwillinbury. " 1	57	62	119	30	149	199	119	72	....	8	.....	.....	20	.....	20	
	do .. " 2	58	56	114	57	171	199	114	84	1	....	.....	.....	20	.....	20	2151
	do .. " 3	178— 63	176— 58	121	79	200	200	121	78	1	....	.....	.....	20	6	14	
	Georgina..... " 1	55	74	129	95	224	249	129	114	5	1	.....	.....	20	.....	20	
	do ..... " 2	54	33	87	65	152	199	87	112	....	....	.....	.....	20	.....	20	
	do ..... " 3	6	36	42	37	79	200	42	156	1	1	.....	.....	20	.....	20	2482
	do ..... " 4	172— 57	166— 23	80	56	136	199	80	119	....	....	.....	.....	20	.....	20	
	Newmarket ..... " 1	87	25	112	130	242	250	112	138	....	....	.....	.....	20	.....	20	
	do ..... " 2	78	28	106	105	211	200	106	92	1	1	.....	.....	20	2	18	2006
	do ..... " 3	244— 79	85— 32	111	96	207	197	111	86	....	....	.....	.....	20	.....	20	
	Aurora..... " 1	113	85	198	91	289	249	198	45	4	2	.....	.....	20	.....	20	
	do ..... " 2	189— 76	146— 61	137	54	191	199	137	55	2	5	.....	.....	20	....	20	1540
	Holland Landing	36— 36	45— 45	81	63	144	200	81	119	....	....	.....	.....	20	.....	20	580
	Stouffville.....	77— 77	10— 10	87	75	162	200	87	112	....	1	.....	.....	20	.....	20	407
	Totals.....	2220 1337	1337	3557	2726	6283	7285	3557	3670	29	28	.....	1	700	26	674	24502
	Maj. for Widdifield...	883															

FIFTH ANNUAL REPORT

OF THE

PROVINCIAL BOARD OF HEALTH

OF ONTARIO,

BEING FOR THE YEAR 1886.

Printed by Order of the Legislative Assembly.

Toronto:
PRINTED BY WARWICK & SONS, 26 AND 28 FRONT STREET WEST.
1887.

FIFTH ANNUAL REPORT

OF THE

PROVINCIAL BOARD OF HEALTH.

To His Honour the Honourable John Beverley Robinson,
Lieut.-Governor of the Province of Ontario.

May it Please Your Honour :

The Provincial Board of Health begs leave to present this, its Fifth Annual Report. The appendices following the Report contain reports and investigations on the following subjects, that in relation to the health of the Province, have occupied the attention of the Board during the year 1886 :—

1. Annual Address of Chairman.
2. Health Notes of a Recent Tour in Great Britain, by the Chairman.
3. Report on the Ontario Vaccine Farm, to which is appended a summary of results of vaccine used in Ontario in 1885.
4. Abattoirs and Slaughter-houses ; Report on the Toronto Cattle Market.
5. Reports on the Construction and Management of Cheese Factories and Dairies.
6. Report of the Committee on Foods, Drinks, etc., regarding the sources of Ice Supply.
7. Reports of the Committee on Sewage, Drainage and Water Supply, on—
   - (*a*) Contemplated System of Sewerage for Stratford.
   - (*b*) " " Owen Sound.
   - (*c*) " " St. Catharines.
   - (*d*) " " Brockville.
   - (*e*) " Trunk Sewer for Toronto.
   - (*f*) " System of Water Supply for Cornwall.
8. Report of the Committee on Poisons, Explosives, Accidents, etc., etc., *re* Illuminating Gas.
9. Report of Delegate to the Canada Medical Association, on Quarantine and other matters.
10. Report of the Secretary on the Brantford Starch Factory Nuisance.
11. Annual Reports of Local Boards of Health.

The progress of Sanitation in our Province during the last year, we may fairly consider to have been satisfactory, and the good work done by the numerous Local Boards most encouraging, affording conclusive evidence of an increase of interest in the minds of the people on matters connected with public health. On the routine work of our Board it will be unnecessary to dilate, as the Secretary, in his report, will enter fully on the discussion of all matters that at the various quarterly and special meetings have occupied the attention of the members; but on a few points of great importance to the community at large, I purpose briefly commenting:—1st. On the establishment of a vaccine farm at Palmerston, under the supervision of the Board and subsidized by the Government, Dr. Stewart, of that town, being the Manager. The occasional but somewhat rare occurrence of death from smallpox after vaccination, erysipelas and cases of blood poisoning from the use of impure virus, have led to a distrust in the minds of many to the practise of vaccination, as the Medical Officers, during the epidemic of last year in the Province of Quebec, had, too frequently for success in stamping out the disease, occasion for observing. It therefore became the imperative duty of all State and Provincial Boards of Health to endeavour to provide for the area of country under their charge vaccine virus to which no possible suspicion could attach. In view of the great importance of convincing the public that every possible precaution against impurity should be insisted on, it was deemed by our Board that the frequent supervision by the Secretary and one of our members resident in the neighbourhood, and the *quasi* Government imprimatur, would be the most effectual step towards antagonizing a most disastrous prejudice. Entertaining this belief at a meeting of the Board, February 2nd, 1886, the following resolution, moved by Dr. Yeomans, seconded by Dr. Cassidy, was carried: "That this Board having received notification from Dr. Stewart, of Palmerston, of the establishment by him of a vaccine farm, that he has supplied medical men throughout the Province, and further has asked continued inspection of his farm and methods of procedure, therefore this Board recommend that the Government should provide for the continued, frequent and thorough inspection of this vaccine farm, or other vaccine farms that may hereafter be established, with the object of securing a supply of pure and reliable vaccine lymph, procurable within this Province; and that a copy of this resolution be transmitted to the Attorney-General." At the quarterly meeting in May, Dr. Bryce read his report on the inspection made of the Ontario Vaccine Farm at Palmerston, which report was received and adopted. On the following day, on motion of Dr. Yeomans, seconded by Dr. Cassidy, it was resolved, "That inasmuch as Dr. Stewart had fulfilled some of the conditions required by this Board for the supply of reliable vaccine virus for the Province, this Board would recommend the payment of $250 out of the Government grant, also that the remainder be paid in quarterly instalments, Dr. Stewart continuing to fulfil the conditions laid down by this Board." Since the establishment of this vaccine farm the supply of virus required in our Province has been largely obtained from Dr. Stewart to the complete satisfaction—at least from any communications to our Board to the contrary—of all who have made use of it. By this establishment of a vaccine institution under Government surveillance, the members of the Board entertain the hope that the prejudice existing in the minds of too many for safety against the dreaded disease, Smallpox, by vaccination, may in time be dispelled and the use of the only effectual preventive universally had recourse to. At a special meeting of the Board convened on the 21st of April for the consideration of a proposed plan for greatly enlarging the cattle market, at the present time nearly in the heart of the city of Toronto, the centre of this trade, Dr. Bryce read a report he had been requested to prepare after viewing the site and the active building operations in the numerous streets surrounding. The report was adopted after discussion, in which there was a unanimity of opinion expressed that cattle markets in large and growing cities should be placed on lines of supplying and distributing railways, at such a distance from city boundaries as would insure freedom from all nuisance to the inhabitants of the outlying neighbourhood. By the establishment of an abattoir within the grounds of the cattle market the inhabitants of the city would escape the nuisance arising out of the numerous private slaughtering houses scattered around, the blood from many passing into the drains, while from others, with imperfect ventilation and want of drainage, a contamination of the air of the locality in which they are situated

necessarily ensues. With an abattoir situated adjoining the cattle grounds the blood might be converted, without creating a nuisance, into a valuable manure. At the Edinburgh abattoir the amount received annually from blood has risen from between two hundred (£200) and four hundred and fifty pounds (£450) sterling, to from eight hundred (£800) to twelve hundred pounds (£1,200) sterling, by contract with a Manchester firm, who have erected extensive premises and apparatus for extracting from the blood the albumen used in calico printing and converting the clot into valuable manure. In connection with the establishment is a boiling house, where all meat unfit for human food is boiled down and destroyed. Mr. Strype, an English civil engineer, has demonstrated that blood may be converted into a manure without creating any nuisance, by a solution of hydrated sulphate of alumina; a fiftieth of this solution when added to the blood being quite sufficient to prevent offensive effluvium, and the resulting mixture of blood and sulphate of alumina can be dried for use in pans over a fire without nuisance resulting. The dried blood obtained is of high fertilizing value and contains nitrogenous matter equal to fourteen or fifteen per cent. of ammonia. Mr. Strype has this process extensively carried out at the *Saladeros*, or slaughter-houses, at Monte Video, and Buenos Ayres. This dried blood for manure realizes between six and seven pounds sterling per ton. As there are many diseases which render the flesh of animals unfit for human food, and as thorough practical knowledge of the physical appearances of the animals so suffering, and of the various kinds of animal food as free from objection, is comparatively rarely possessed by Officers of Health or Sanitary Inspectors, an experienced Veterinary Surgeon should decide on the freedom from disease of all animals brought to a cattle market.

At the quarterly meeting of the Board on October 11th, a large number of communications relating to recent outbreaks of diphtheria in different parts of the province were read by the Secretary, going to show an increasing prevalence of the disease in the Province. In consequence the Board went into Committee of the whole *re* preparing regulations for limiting the spread of diphtheria, and after due consideration reported the regulations for isolating cases of this disease to the Board, the very frequent outbreaks of diphtheria, with large attendant mortality reported to the Secretary, rendering enforced isolation in the dwelling when at all practicable, or otherwise at properly isolated buildings equally necessary, as in cases of smallpox or scarlet fever. For the former, vaccination and re-vaccination furnishes efficient protection, but for diphtheria and scarlet fever no reliable preventatives are known to the profession beyond pure drinking water and guarding against contamination of the soil with organic matter—not even these after exposure. Of impure water as a factor, the report of the late Dr. Elisha Harris on an epidemic of malignant diphtheria in Northern Vermont, is a most conclusive evidence. The ascertained cause was drinking from a brook containing dead animals. Dr. Harris states that more than half of the inhabitants were attacked with the disease, sixteen per cent. were dead from this disease at the time of his visit; subsequently thirty per cent. of the cases were fatal. This occurred in a section where only one or two deaths, or in the whole township, eight or nine usually occur in the whole year; that is, where the annual death rate had been steadily from 14 to 17 per 1,000, it now, for the period of five weeks, from diphtheria alone, became 140 per 1,000 yearly rate; while in the district itself, had the same ratio of destruction continued for a year, none would have remained alive. (See Report of National Board of Health for 1879, page 274.)

Allowing that decomposing organic matter, present in the soil has not, as conclusively as its presence in water, been demonstrated as the direct factor in the autogenesis of diphtheria in Dr. Harris' report of the Vermont epidemic, it must by all sanitarians be conceded that the health depressing influences of the emanations from impure soil must render all persons exposed to it much more susceptible of the specific contagion, when exposed, either as attendants on a case, or as inmates of the house. Professor Nettleship's letter, recently in the London *Times*, commented on in the *British Medical Journal* on the 6th of October, led to the Local Government Board sending Mr Spear to report on this epidemic at West Cowes. With the consent of the medical attendants, he visited the cases in the town then under treatment, and saw, besides several other cases, seven well marked unequivocal cases of diphtheria in four different families, and was able to prove that

defective drainage and sewerage of the houses was at the bottom of the mischief. In the application of our Board for the same power to isolate diphtheria, that by the regulations of last year was conferred in cases of smallpox, we have a precedent in a similar application for isolation of diphtheria by the Metropolitan Asylums Board to the authorities of the Local Government Board, for permission to admit to their isolation hospitals persons suffering from this disease. Before deciding the point, the Local Government Board took council with the Royal College of Physicians as to whether persons suffering from diphtheria can be regarded as suffering from fever, within the meaning of section 69 of Metropolitan Poor Act. The opinion of the President, Sir William Jenner, was given as follows:

"If the words of the Act had been for patients suffering from 'fevers,' I should most certainly have considered diphtheria to be included under the term 'fever'; but the separation of smallpox from fevers seems to signify that the word 'fever' was intended to include only fevers of a special type, those cases, that is to say, to which the word 'fever' was specially applied, as scarlet fever, typhus fever and typhoid fever."

In these circumstances, the Local Government Board have decided that if diphtheria is to be admitted into isolation fever hospitals, there must be legislation sought, and have intimated to the Asylum managers that the question will receive their consideration. The Editor of the *British Medical Journal* remarks: "There was an important omission from Dr. Thorne's elaborate and very valuable report on the use and influence of hospitals for infectious diseases. He did not discuss at any length the extent to which such hospitals had been employed for the isolation of the different kinds of infectious diseases. It would have been most useful to know what results to the patients, and to the community at large, had followed the attempts at isolating in hospitals such diseases as diphtheria and enteric fever."

The burning question is, how perfect isolation and antisepticism are to be enforced, with unremitting vigilance, during the whole course of the disorder, for the good of the patient and protection of the community in the overcrowded houses of the working classes, and of people generally in poor circumstances, with small, badly ventilated rooms, and complete absence of every requisite for the perfect isolation of the patient and prevention of the spread of the disease to other members of the family. A good case in point was to-day related to me by one of my colleagues in Trinity Medical School. On Monday, the 29th of November, he was called to visit a child six years of age, but found it dead on arrival at the house; learned that it had been taken ill with sore throat the previous Wednesday; found the other children playing in the same room—a hot kitchen, with food uncovered, barrel of potatoes, etc., and a general state favourable to the reception of the *fomites* of the disease. The family consisted of father, mother, seven children, and seven boarders. Two other children were prostrated with the disease; one child, aged twenty-one months, died the next day; the other child, aged four years, he expected would quickly follow. Immediately on ascertaining the nature of the disease, he ordered the mother to remove the two children to an upper chamber, to have everything required handed to her through the partially open door, covered with a sheet, moistened frequently with a solution of corrosive sublimate, to allow no articles of food that had been in the sick room to be taken down stairs, to receive the sputa from the diseased mucous membrane on rags which were to be instantly burnt; placed in two vessels a solution of corrosive sublimate, one for the reception of soiled clothing of patients, the other for the mother to bathe her hands after ministering to the children, and also gave strict injunctions to her to have no communication with other members of the family. On his return he found that the seven boarders had left for some other lodging house, and in view of the fact that they had been exposed to the infection from the Wednesday until the Doctor's arrival on Monday, the chances are that their garments, like the fabled ones of Nissus, will prove media of communicating the disease to other inmates of the new boarding-house they repaired to. Notwithstanding the strict injunctions to the mother to have no intercourse with other members of the family, he found they had been in a measure disregarded, and such will generally be the case when the medical attendant has, for want of better arrangements available, to attempt the work of isolation under such unfavourable circumstances. Had he been called on the Wednesday, the disease would

have been immediately diagnosed, and the work of separation and antisepticism immediately commenced. To have any chance for preventing the spread of this disease, we must have, first, immediate notification of the nature of the disease; second, perfect isolation of the attendant and patient; third, detention of all who have been exposed, whether inmates or visitors, until the period of incubation has elapsed. All these requisites, in the instance of wealthy or well-to-do people, are compatible with keeping the patient or patients in their own homes. A large, well ventilated room in the top story, and absolute exclusion of all but the nurse and medical attendant, with most rigid antiseptic measures, will suffice equally well with removal to an isolated hospital; but with the poor and struggling people, as this typical case illustrates, the effort must prove futile. The objection to removal is a purely sentimental one, and should not be allowed to weigh when the safety of the neighbouring community is concerned. The removal to a properly isolated, constructed and equipped building would tend, not only to a greater chance of recovery of patient or patients suffering from the disease in question, but also add immensely to the greater comfort and immunity from infection of the attendants on the sufferers. It is reasonable enough, under ordinary circumstances, for the owners of a dwelling to talk of their vested interests, of their house as a castle from which compulsory removal would be a violation of their undoubted rights; but when the castle contains that which may be compared to gunpowder or nitro-glycerine, which, if not carefully guarded against, would explode, to the great injury of the residents in the neighbourhood, then the Board contends that it is right and proper that the necessary legislation should be provided by which the people should be protected against sickness, suffering and death, as also the long train of evils as a necessary sequence involved.

The following Table will illustrate the prevalence of this Disease:—

Year.	Population.	—	Total No. of Deaths from Diphtheria.	Ratio to 1,000 of Population.
1882	1,923,610	Province of Ontario.....	1,239	.64
1885	1,923,610	"	1,006	.52
1886	1,923,610	"	620 (to end of June)	.64
1884	1,783,085	Massachusetts	1,084	.60
1885	1,783,085	"	1,003	.51
1884		Cook Co., Illinois, of which Chicago is 14 17ths of population.	587	.68
1883		Minnesota	1,374	1.7

There can be no question that if, in the large proportion of these cases, where perfect isolation was impracticable, the patients had, on prompt notification of the nature of the disease, been removed to a properly adapted building for the prevention of its spread, a very great saving of life and property would have been effected. It would add very greatly to the chances of success in the effort the Provincial Board is making for the prevention of the spread of diphtheria, if all the Local Boards of Health in the Province would endorse that effort by petitioning the Government on the subject.

Another subject of great importance to be alluded to, is the persistence of cholera in various countries in Europe. It has already appeared in South America, and great fears are entertained in New Orleans and Galveston of its being imported from either Buenos Ayres, or Rosario, in the Argentine Republic, at both of which cities it would appear from recent accounts to be extensively prevailing. It is therefore most desirable that the experience in Spain of its most common mode of propagation through the water supply should be generally made known, more particularly as in our cities and many towns of Ontario, the disposal of *excreta* is by the water carriage system and the sewers the channels of discharge into streams, rivers or lakes. It therefore becomes a vital question whether the drinking-water supply, too frequently taken from the same source, may not become contaminated with the specific germ of the disease.

and best to accentuate this cause of danger, I extract from the *British Medical Journal* of October 9th, the following passages relating to the water supply and the prevalence of cholera in Spain. "In Madrid the sewage finds its way by open channels to the river Manzanares. Madrid suffered heavily from the disease in 1883, the number of cases at one time amounting to no fewer than 800 to 1,200 a day, at the time when new water works were completed but the water supply not available. In 1885 the whole number of cases was 2,207, and the deaths 1,366. The majority of the cases occurred in the houses along the course of the river Manzanares. On the Tagus, below Madrid, stands Aranjuez, and lower down Toledo, both take their drinking water supply from the river, and Aranjuez was more than decimated by cholera. But at Toledo the governor, with commendable prompitude, stopped the pumps and compelled the inhabitants to bring their water from a spring some miles away, and forbade them even to wash their clothes or bathe in the river. The hardship was greatly felt, but the city was saved from the disease.

Granada, Murcia and Valencia, furnished striking instances of the consequences of using water from sources contaminated by the poison of cholera.

"Granada is supplied with water from the rivers Genil and Darro, which irrigated the fertile plains on which the city stands, the canals by which it is brought to the town being uncovered and exposed to every kind of pollution. The Cholera broke out in July, spreading with fearful rapidity. In August the number of officially reported cases was 450 a day. By the middle of September the epidemic had exhausted itself, the total number of deaths having been, according to official reports, 5,903, though in reality far in excess of this number, some, indeed, maintaining that these figures should be doubled. At one time there were no fewer than 400 or 500 corpses lying piled up in the cemetery waiting interment. The course of the epidemic followed the rivers Genil and Darro wherever their waters were used for drinking purposes. A large mortality from other towns and cities occurred where the drinking water was contaminated." We thus see that the sanitary conditions of the various towns being nearly equally bad, made very little difference, the incidence of the disease being everywhere in direct relation to the water supply where, as in Seville, Malaga, Jerez and Madrid, the water was good, the disease was slight or even absent. Where the water supply was polluted by the choleraic excreta of the neighbouring population, the epidemic was severely felt; and most striking of all at Toledo, where the unsanitary conditions and filthy state of the town, at the best of times, could not but have been intensified by the deprivation of the usual water supply, the compulsory employment of a pure water, though scarcely more than was absolutely necessary for drinking purposes. had the effect of completely averting the pestilence. Filtration, such as it was, seems to have been of little use, but a pure supply, whether from springs or from mountain streams, was invariably successful. This experience of the mode of communication of the disease in Spain is in complete harmony with the demonstration of Dr. Snow in 1854, in the Bond street case, in which it was made apparent that the poison which causes Cholera is contained in the excreta of those suffering from the disease, and that if by leakage, soakage from cesspools or sewers, or by the reckless casting out on the ground of slops containing the infective matter, this may obtain access to wells and other sources of drinkikg water, and impart—as has been stated by Mr. Simon—to enormous volumes of water the power of propagating the disease. In no other way than this is it generally held that from Cholera patients can the disease be communicated, unless possibly it may be that, in very small and badly ventilated rooms, this organic poison having been disseminated in quantities through the atmosphere, may possibly be taken by the attendants into the system and from them again communicated. Professor Petenkoffer holds that if this infectious matter, after leaving the body happens to pass into the ground, it may then, under peculiar conditions of soil, moisture and heat, undergo definite changes, and then rising as a miasm in the air poison those who have a predisposition to the disease. The conclusions arrived at in Bengal by Drs. Lewis and Cunningham incline to this view. These illustrations, however, of the media by which this formidable disease is propagated, are not furnished from any reasonable ground of apprehension that an epidemic of it is at all likely to occur in our Dominion; for even if, notwithstanding the very excellent marine sanitation to be found

from along the coast line from Galveston, Texas, to Portland, Maine, and on our coast from Halifax to Grosse Isle and Quebec, a few cases might escape the quarantine, and thus find entrance, they would, under the strict system of State and Provincial inland sanitation, be quickly stamped out. The only reason for adducing in this report the fearful statistics of the ravages of this pestilence in Spain, is to remind our Local Boards of Health that although a drinking water may by the analysis of scientific chemists be proven to be free from nitrates, nitrites, chlorides, ammonia, and but a trace of albuminoid ammonia, that when there is a question of the possibility of the presence of the specific germ of an infectious disease prevailing in the neighbourhood of the place where the public sewers have their outlet into stream, river, bay, or lake, then the question of the chance of the source of drinking-water supply being polluted by the access of these germs is one for serious consideration, and prompt attention to avoidance of such a cause of disease is indicated. It is clearly the paramount duty of Boards of Health, Provincial and Local, to give continuous and active attention to the causes of the diffusion of epidemic diseases to combat the ideas that prevailed at the commencement of the present century, viz.: that ailments of every kind were more or less a portion of the necessary suffering of existence. Fortunately, however, for humanity, within the fifty years of the reign of Queen Victoria, within the same period of the noble life work of Dr. Bowditch, of Massachusetts, and of other illustrious explorers in the field of preventive medicine on the continent of Europe, the diseases long thought to be out of the range of medical inquiry as to first causes, have been in many instances traced, and by a gradual extension of correct knowledge, have been proven to be preventible, and the system of relieving mankind of its load of disease can no longer rest alone on curative medicine. Dr. Benjamin Ward Richardson very clearly expresses what should be the grand work of our era "to reconcile the two different schools; to systematise the preventive part of medical science so far as that is now known; to bring the preventive part in entire accord with the remedial or curative; to let the world at large understand the inter relationships which exist between the two parts; and by a sympathy of action, based on knowledge, to enable every man and woman to assist in that part which tends towards prevention."

In an interesting and most useful address delivered by Captain Douglass Galton, on the opening of the one hundred and third session of the Society of Arts, November 17th, 1886, is most graphically portrayed the progress in the prevention of disease and general sanitation, during Her Majesty's reign. As the *Journal of the Society of Arts*, in which a striking description of the insanitary condition of the working people in Great Britain at the time Queen Victoria came to the throne, and their immensely improved state at the present time, is I apprehend, but sparsely circulated in our Province, I insert a few passages, at the same time recommending every Medical Health Officer and Local Board to procure a copy of the journal and make a careful study of the various tables contained in it. "The Queen's accession to the throne took place in June, 1837, and registration of births, deaths and marriages came into operation the following July, and thus the jubilee year of the Queen is the jubilee year of the registration of disease, supplying a basis of accurately observed facts, enabling the medical man to substitute numeric expressions for vague conjecture, and by affording the necessary data for ascertaining the prevalence and intensity of epidemics, has led to an examination of the existing causes of the diseases. This knowledge was the first step towards their prevention. Dr. Farr, in submitting the abstracts of death records for the first half year of registration between the 30th of June and 31st of December 1837, says: "It may be affirmed without great risk of exaggeration that it is possible to reduce the annual deaths in England and Wales by thirty thousand, and to increase the vigour, industry and wealth of the population, in an equal proportion, for diseases are the iron index of misery which recedes before strength, health and happiness, as the mortality declines." In 1837 it was calculated that one-tenth of the population of Manchester, and one seventh of the population of Liverpool lived in cellars. The following is a description of a court in Manchester with its accompaniment of cellar accommodations. It was unpaved, down the middle a gutter found its way, every now and then forming pools in the holes with which the court abounded. Women from their doors tossed household

slops of every description into the gutter, which ran into the nearest pool, which overflowed and stagnated. Steps down from this filthy court led down to the dwelling beneath. It was very dark inside. The window panes were broken and stopped with rags. The smell was so foul as almost to knock down the incomer. The children lay on the damp wet brick floor through which the stagnant moisture of the street oozed up. In many parts of London the dead were buried under over-crowded churches, chapels and churchyards. In 1845, a chapel in the immediate neighbourhood of Lincoln's-Inn-Fields was used as a school room in the day time, and a dancing saloon at night. In the cellars underneath the chapel ten thousand bodies had been interred in the seventeen years ending 1840; the burials were still continuing, and the old coffins were removed through a contiguous sewer to make room for new ones.

The rural districts were no better. (*See account by Sir H. Acland.*)

The village school was a room eleven feet by seven feet, where thirteen children were being taught lace making. They slept in a room eleven feet by twelve feet, the beds touching, so that there was no room to stand between them. Next door, a cottage occupied by three men, had as its only furniture, a log of wood to sit on: the bed-room was reached by a short ladder with six rungs, of which two were gone, the only bedding, some straw slept on until it was as small as chaff, the only bed clothes, some sacking.

The provision of pure water, and the disposal of the water after it had been fouled, had scarcely been thought about. In London, and in some large towns, water was provided by public companies, but in almost every country town the water was defective. Sir H. Acland describes the water supply of a village in Oxfordshire, some thirty five years ago, as a pit in the middle of a field, a quarter of a mile from the village, the sides of which were trodden down by cattle which went to drink and deposited the filth around. With regard to fœcal matter, the general practice had been for each house to have its cesspit, which was emptied at intervals by night men, but in the poor districts, the soil was allowed by the occupiers to accumulate for years, to avoid the expense of emptying. When water closets were first introduced, the difficulties as to drainage, sewerage, and removal of refuse, were principally created by the absence of any legal machinery to enable the inhabitants to combine for sanitary purposes, and share the expenses necessary for improvements. Another important insanitary condition was caused by the fact, that the vagrant population of the kingdom resorted to common lodging houses, which were under no sort of supervision, and which were *foci* for the propagation of epidemic disease, as well as of moral depravity. The general conclusions at which the Poor Law Commissioners arrived in their report on the condition of the working classes were, that the disease originating in, or propagated by means of decomposing filth and refuse, damp, close and overcrowded dwellings, prevailed generally among the working classes of the kingdom, and that whilst these diseases could be abated by improved sanitary conditions, they were not removed by high wages and abundant food, if sanitary conditions were absent. They also pointed out that, owing to the defective water supply, cleanly habits were impossible. In illustration of the loss, caused to the nation by these preventible diseases, they mentioned that out of 43,000 widows, and 112,000 destitute orphans, relieved from the poor rates, the greater number had lost their husbands or fathers from preventible disease, and that the youthful population of either sex brought up in crowded, unwholesome dwellings, and under the adverse circumstances described, were deficient in physical strength and moral conduct, and grew up improvident, reckless and intemperate, caring for nothing but sensual gratification. The conditions required by these Commissioners for improving this insanitary state, were provision of drainage, removal of all *excreta* refuse from habitations, streets and roads, and improvement of water supply. They proposed the use of water carriage for *excreta* to be carried a distance from cities or towns; better supply of drinking water: that the expenses of public drainage and sewerage, improved means of cleansing would be a pecuniary gain by diminishing existing charges, attendant on sickness and premature death; that skilful engineers should be employed, to devise and construct new public works; to appoint in each district, specially qualified medical officers of health, to examine into the means necessary for prevention of disease, and to initiate sanitary measures, *i.e.* the removal of noxious, physical circumstances, and the promotion of civic, household and personal cleanliness, necessary for the improvement of the mora

condition of the population, for sound morality and refinement in manners and health are not long found co-existent with filthy habits amongst any class of the community. This report was one of the early fruits of the system of vital statistics, commenced under the auspices of the Queen, by the late eminent Dr. Farr, and the report drawn up by the veteran sanitarian, Mr. Edwin Chadwick, C. B. At the same time, in the large cities, private associations were formed to encourage cleanliness, by establishing public baths and wash-houses. These advances in sanitation were greatly promoted by a threatened epidemic of Cholera, the first epidemic of 1832 having had as a result 16,437 victims, and that in 1848, having nearly decimated the cities and towns of the lower Danube, it passed through Austria into Germany and Hanover. Hamburg was attacked on the 7th of September, and within three weeks it reached the shores of England, and first appeared in London on the 22nd of September, 1848. This epidemic continued in Great Britain until the 22nd of December, 1849. It attacked those towns and houses which afforded it the best inducements to visit them in their filth, decaying refuse, crowded and dirty population, bad water, damp, polluted sub-soil, or any other conditions leading to bad health. The total number of victims of this second epidemic was 53,293. The Government was then led to the conclusion that further and more efficient provisions ought to be made for improving the sanitary condition of cities and populous towns in England and Wales, and an Act was passed creating a General Board of Health, the main feature of which was, that when the Registrar General's returns showed that the number of deaths on an average of the preceding seven years exceeded twenty-three per 1,000, the General Board of Health were empowered to send an inspector to make a public enquiry as to the sewerage, drainage, water supply, burial grounds, number and sanitary condition of inhabitants, and local sanitary acts in force; also, as to natural drainage areas, existing local boundaries, and whether others might be advantageously adopted. The General Board was also empowered to create a system of local administration by Local Boards of Health, and these Local Boards had the power given them to appoint necessary officers, including medical officers, surveyors, and inspectors of nuisances; public sewers vested in their administration: all new houses to be approved by the surveyor, and before any new house was commenced the levels of the cellars and the position of the drains was to be appointed by the surveyor. Occupation of cellars as dwellings was prohibited, in addition a number of other matters provided for improved sanitation. In 1849-50 Sir Robert Rawlinson introduced the system of constructing sewers and drains in right lines from point to point, with lampholes, or manholes, at every change of direction or gradient. The subject of pollution of streams and rivers by the water carriage system, was repeatedly discussed, and, on this vexed question, Captain Douglas Galton is of the opinion that it may be safely assumed that the water supply, which is delivered pure into a town, need not be passed in a foul state into streams or rivers, and that precipitation of the solid parts in sewage, and passing the liquid through land are eminently fitted, when properly applied, to produce a purified effluent at a certain cost. Consequently, if certain conditions of population and of sewage were always observed, each district could be made self contained in respect of its sewage, just as it can be in respect of its cemetery, and it is probably wiser to spend money raised by rates on removing the solid matter, filtering the liquid through land, and employing labour on the land to produce food to be sold, rather than to spend the rates in paying interest on a large capital expended for works necessary to convey the sewage to a distance where its value would be entirely lost. Dr. Farr, in his report to the Registrar General on the death causes of 1838, says: "The careful exclusion of all unnecessary animal and vegetable matter, the immediate removal of all residual products, and the dilution of inevitable exhalations. The dead should no longer be buried where they are surrounded by buildings or dwellings; non wholesome manufactories should be excluded from populated districts, and there is no assuredly reason why thousands of cattle, sheep and pigs, animals of every kind, sometimes affected with epizootic diseases, should be gathered together in market places within cities."

Although in the housing of the working classes much remains to be done, we have results to show that much sanitary improvement has been achieved by reconstruction of drains, removal of sewage from the midst of the population, opening out thoroughfares so as to admit ventilation in crowded districts. The death rate in London in the five years,

1838-42, was 25.57 per 1,000. In the five years, 1880-84, it was 21.01 per 1,000; and the deaths from zymotic diseases which, in the decade 1841-50, had averaged annually 5.29 per 1,000, were reduced in the years 1881-84 to 3.4 per 1,000. If, however, we assume that there had been no change in sanitary conditions, and, therefore, that the death rate had gone on increasing, according to Dr. Farr's formula of increase, due to density of population, where sanitary conditions remain unchanged, the death rate of 1880-84 would have averaged 26.62 per 1,000; that is a saving of 5.61 per 1,000 effected by sanitary measures. If, on this basis, we compare the saving in life, which has resulted from sanitary improvements at different periods since 1838-42, we find that it amounted to an annual saving of 4,604 lives during 1860-70, of 13,929 lives annually during 1870-80, and of 21,847 lives annually between 1880-84. The death rate of England and Wales for 1838-42 was 22.07 per 1,000, that of 1880-84 was 19.62 per 1,000, and the deaths from zymotic diseases, which averaged 4.52 per 1,000 in the decade 1841-50 per 1,000, were reduced to 2.71 per 1,000 in the years 1880-84. The improvement in urban districts does not appear to have kept pace with that in rural districts, for, in Table E, it appears that whilst the deaths from zymotic diseases in certain urban districts have declined from 5.89 per 1,000 in the decade 1851-60 to, 5.12 per 1,000 in the decade 1871-80, the deaths from zymotic disease in rural districts in the same interval have declined from 2.77 to 1.67 per 1,000. In order to form an estimate of the saving of life due to sanitary measures, we may assume that sanitation remained in abeyance, and calculate what the death rate, according to Dr. Farr's formula, would have been in consequence of increased density of population, and compare that with the actual death rate; upon this assumption we find that the sanitary improvements only began to produce their effects after the cholera epidemic of 1848-49. In the decade 1841-50, indeed, it appears that the death rate was actually larger than that due to the increase of population. But in the following decade, the sanitary improvements began to produce their effects, and this effect has gradually increased. In the decade 1850-60 the annual average saving of lives in England and Wales from sanitary improvements was 7,789. In the decade 1860-70 it rose to 10,481. In the decade 1870-80 it was 48,433, and in the five years, 1880-84, the average annual number of lives saved by sanitary improvement has been 102,240. Captain Galton, at the conclusion of his lecture, which the Attorney-General in proposing a vote of thanks characterized as one of the best ever delivered before the society, thus speaks: "The changes which have taken place in the last fifty years in every branch of life, social, political and commercial, will make the reign of Queen Victoria ever stand out as an important historical epoch. In respect of sanitation he found that the old system designed to regulate the sanitary condition of the people in simpler times, for a small population no longer met the exigencies of our crowded cities and more complicated habits of life. H. R. H. The Prince Consort, was one of the early promoters of sanitary progress; he was always seeking what would improve the condition of the working classes, and he used his whole influence to push forward the movement for improving the health of the army. The present President of the Society of Arts, the Prince of Wales, has worthily followed in the footsteps of his father, having initiated and carried through with marked success the Exhibition of Health and Education, the Inventions Exhibition, and, lastly, this year, the Colonial Exhibition, which has helped to cement the feeling of brotherhood between us and our Colonial Empire. H. R. H. was also the active chairman of the Royal Commission on the Housing of the Working Classes. The Queen may have suffered much from private grief, and endured much from public cases, but on entering the jubilee year of her reign she will be able to feel that she has not laboured in vain. She may feel satisfaction at having increased, by added provinces, that legacy of empire which she received from her predecessors, but she will have the greater satisfaction of feeling that the provinces which she has added are the smallest part of the triumphs of her reign. Those triumphs are best summed up in the million of lives saved, the consequent vast amount of disease which has been avoided; the physicial health which has been promoted, the education which has been developed. Indeed the chief feature of the Queen's beneficient reign has been the improvement that it has produced in the morality, the well-being, that is to say, the happiness, of her people."

The above extracts from this comprehensive address on what has been done in the past in the cause of increased sanitation in England, should stimulate provincial and local boards in this Dominion to make such continued efforts in the work of preventing the causation and spread of disease, that in the course of a few years we may be able to exhibit, as a direct result of enforcement of health laws, evidences of a diminished death rate in proportion to population fully equal to that which appears in Captain Galton's tables A, B, C, D and E. In this endeavour we are well assured that in the future, as in the past, we shall be aided in all reasonable requests for additional health legislation. The members of the Provincial Board of Health have always received at the hands of the members of the Ontario Cabinet, not only a patient and courteous hearing, but the Government have also manifested evidences of their desire to grant increased sanitary legislation whenever it could be made apparent to them that such was imperatively required. Our Board has also to acknowledge the attention given by the Dominion Government to defects pointed out by Dr. Rauch, in his survey of the quarantine stations from the Gulf of Mexico to Portland, Maine, to Halifax and Quebec; as also to those pointed out by Dr. Bryce, last summer, as existing at Grosse Isle—defects which, we are happy to learn from Dr. Montizambert, have been in large measure remedied. Imperfect sewerage and disposal of sewage, and contamination of drinking-water supply, are universally admitted to be the chief factors in epidemics of typhoid, diphtheria, and other infectious diseases. Involving, as such epidemics do generally, large outlays of money for the effective removal of the above causes of disease, such outlays and expenditures frequently prove an insuperable difficulty for Local Boards alone to dispose of. The importance, therefore, is made evident of all diseases, whether proceeding from impure water, or, as in the instance of small-pox, traceable to imported cases from other provinces, or from beyond sea, being immediately reported to the Provincial Board, in order that immediate notification of the appearance of such zymotic diseases, and of the extent to which they are prevailing should, as agreed upon by the various states and provinces, at the meeting of the National Conference of State Boards in Toronto in October last, be communicated to the various Provinces of our Dominion and States of the Union contiguous to our borders, and thus the avenues of travel may be in some measure protected. As this precaution was unanimously agreed upon at the meeting of the above Conference, it is to be hoped that the Medical Officers of Local Boards will invariably comply, and thus powerfully co-operate with the Provincial Board in its efforts at removing causes, or *ad interim*, limiting the spread of communicable disease.

From the very numerous Local Boards organized since the first establishment of the Provincial Board, most valuable advances in the work of general sanitation have been made, as shown by the very excellent reports of the Local Health Officers; and with great satisfaction at the increase of interest in the work of prevention of such diseases that are within the compass of self help, we are able to announce that since the issue of our last report, the number of Local Boards of Health in our Province has been increased from 391 in 1884, and 570 in 1885 to 610 in 1886.

All of which is respectfully submitted,

CHAS. WM. COVERNTON, M.D.,
Chairman Provincial Board of Health.

REPORT OF THE SECRETARY.

To the Chairman and Members of the Provincial Board of Health:—

GENTLEMEN,—In presenting for your consideration a review of the Board's work during the year now closing, it is natural and proper that I should revert briefly to the position of the Province as regards its health relations at the time when this sanitary year may be said to have begun. In doing so, I cannot help contrasting the commencement of this year with that for which my last report addressed to you was prepared.

Referring to the commencement of the last report, I find myself saying:—"Never since its organization has the Board seen the new year begin with a dawn so ominous of coming evil and its rising sun so obscured with dark and gloomy clouds as did 1885."

On page 37 of the same report, written during this year, I find it stated in reference to the great Smallpox epidemic:—"As an evidence that the work has, however, been generally satisfactory, it is pleasing to be able to state that at the date on which this is being written, February 8th, 1886, there is not a single case of Smallpox in Ontario."

This statement regarding Smallpox can, I am thankful to say, be made with the same truthfulness at the present moment, and with the exception of hardly more than a single outbreak, might have been used at any time during the past ten months. When, in addition to this, I add that the past year has been practically free from any reports of the approach of that other dreaded epidemic disease, Cholera, your Board will appreciate the pleasure I have in recalling to your recollection the fact that your Committee on Epidemics has, during this, had a breathing space after its exhausting labors of last year. But this breathing space is, during an armistice, not a truce, with these foes to health, and it seems as if, in the history of our work, we are following the ordinary law as regards zymotic diseases, and hence it becomes us to observe the teachings of the old adage, "In peace prepare for war."

Taking a comprehensive survey of our work during this year, it will at once appear to you that our work has been, in a special and peculiar sense, of this kind. Victorious in last year's warfare, we have, while singing pæans with our fellow-soldiers from every corner of the continent in the great annual American Health Congress, been industriously laboring to maintain the ground gained, by strengthing our defences, both internal and along the coast, and have, if not going forth to foreign war, been impressing more soldiers into the service, completing our organization and improving both the drill and the weapons of our army.

In presenting, in a condensed form, as my report to you, and through you to the Minister of the Department a summary of work done during the year, I propose, for the sake of convenience, to submit it rather by classification of subjects than in any chronological order. Following this I desire, with your permission, to present to the public a *resumé* of some of the ends arrived at and work accomplished during the past semi-decade, which is the first five years of our existence as a Board, with the hope that the recognition by ourselves of "something attempted, something done," will impel us both to a fuller realization of our duties in the future and to a clearer appreciation of the opportunities we have of making the shadows fall less heavily here and there on the lives of our fellows through helping to ward off the attacks of death by teaching the laws of a higher, because of a more rational and healthful life, and of urging, through every means at our command, the more thorough enforcement of statutory enactments and of pressing for more precise legislation on those points, which, through experience, we have learned to be insufficient and ineffective.

These points presented, it will probably not be thought by you inopportune if I present a somewhat detailed study of Diphtheria, which, during the present year, more than any other of those zymotic diseases with which we have to deal so intimately, has been brought before us, and which has caused us to discuss somewhat fully those measures most likely to limit its spread, and to present regulations therefor to the Lieutenant-Governor in Council for approval.

I.—Outbreaks of Contagious Diseases.

1. *Smallpox.*—As stated in the last pages of my last year's report on Smallpox, there were but two of the Board's Medical Inspectors remaining at the time of writing, February 8th, inspecting daily the trains running westward from Montreal. They were recalled late in February and the final act of the Montreal drama, as played by this Board, had drawn to a close. The effects of the epidemic did not wholly cease, however, at this time, as cases of Smallpox occurred as follows during several subsequent months in the counties bordering upon the Province of Quebec :—

Smallpox Cases Connected with Montreal Outbreak.

March	South Plantagenet, Prescott and Russell.	cases,	6,	deaths,	0
April	Huntly Township, Carleton County	"	5,	"	0
"	Ottawa, County Carleton	"	7.	"	2
May	Kenyon, Glengary	"	1.	"	0

Such, as far as I am aware, are the last cases traceable to the Montreal epidemic. With those included in last year's report, it may be estimated that, directly or indirectly from this centre, 150 cases occurred, with a total of some 22 deaths. In spite, therefore, of the many difficulties in preventing the entrance of Smallpox into these eastern townships bordering on Quebec, our laws, carried into effect by the Boards of Health and their officers, were found equal to the task of limiting the disease, in most instances, to the houses in which it broke out first.

With the commencement of ocean navigation *via* the St. Lawrence, and of the immigrant travel westward, the dangers usually attendant upon the influx of so many persons from many European countries, exposed throughout thousands of miles of travel, to possible sources of contagion both on sea and land, were again looked for. Several reports had reached the Board that cases had occurred on different ocean steamships arriving at Quebec and Montreal, and the necessity for the carrying out of strict quarantine inspection became once more apparent. Not having learned that any regulations, additional to those previously existing, were being enforced along the St. Lawrence, I arranged, with the sanction of the Chairman of the Board and the Minister of the Department, to visit the St. Lawrence stations early in June. The necessity for this became apparent the very day I started on the trip, as information had been received from Mr. James Beatty, Lake Traffic Superintendent C. P. R., to the effect that two cases of Smallpox had appeared at Owen Sound, being men from the crew of the steamer *Athabasca*. Having conferred with Mr. Beatty as to the measures to be taken under the circumstances, and having telegraphed instructions to the Medical Health Officer, Dr. A. Cameron, Owen Sound, the further conduct of the matter was left in the hands of the Chairman.

Having proceeded to Quebec and subsequently to Grosse Isle, I learned from Dr. F. Montizambert, Chief Quarantine Officer of the St. Lawrence, that Russian immigrants suffering from Smallpox had been landed at Grosse Isle about the 13th of May. Imagining that their fellow passengers might have passed on the way to Manitoba *via* Lake Superior, I at once wrote to Mr. Beatty for information on this point. He promptly replied that certain Russian immigrants had passed up the lakes on May 20th *per* S.S. *Athabasca*, and as I had learned that none of her crew were from Lower Canada, where Smallpox had been so prevalent, I at once connected the outbreak in the persons of two of the crew with these immigrants. To show that the contagion had been carried on this steamer either by persons, clothing or baggage, I was soon to have ample proof. On the 30th of June I received a telegram from Dr. J. Hamilton, Supervising Surgeon General U. S. Marine Hospital Service, and some days afterwards similar information from Dr. H. B. Baker, Secretary Michigan State Board of Health, that a man, named Montgomery had entered Michigan *via* Sault Ste. Marie and had taken sick with Smallpox at Stalwart, Chippewa County. I found later that he had gone from Harriston, Ont., to the Sault on the S.S. *Athabasca* of May 20th. Having further noticed the occurrence of a case of Smallpox about the same time in Woodlands, Man., and believing in its possible connection with the same Russian immigrants, I wrote for information to

the Deputy Minister of Agriculture, Winnipeg, Acton C. Burrows, Esq. He promptly replied, courteously forwarding, as soon as obtained, information to the effect that a Mrs. A. Church had arrived at Halifax on April 4th and had passed *via* C. P. R. direct to Winnipeg ; that there had been no Smallpox at the place she left in England ; that there had been none on the Allan S.S. *Parisian*, of which she was a passenger, but that she had remained at the Dominion Immigration Building in Winnipeg till about the end of May (five days, say, after the Russian immigrants must have reached there), and that within less than two weeks from the time she left the Immigration Building and had reached Woodlands, she was taken sick with Smallpox. I was further informed regarding cases of Smallpox in Norfolk County, Man., beginning in the person of a man, Donald McCuaig, from Chatham, who had arrived in Manitoba about the end of May. Evidence to the effect that he had gone up by the S.S. *Athabasca*, or had been in the Immigrant Building, has not been obtained. The matter had now become so interesting that I followed out any clue which might connect other cases with these immigrants and the S.S. *Athabasca.*

By newspaper reports I further learned that a family named Skein, Canadians from Manitoulin Island, had been taken sick with Smallpox in Dakota. I at once wrote to Dr. Francis, Manitowaning, for information regarding the route taken by this family. A kind answer containing the following facts was promptly received by me :—There had been no Smallpox on Manitoulin for a number of years, while this family, in going to Dakota, had first taken a local steamer to Owen Sound ; thence they went northward by the C. P. R. steamer *Athabasca*, on the 20th of May. The time of their falling sick corresponded with the period during which they could have been exposed on the *Athabasca.* About this time a report came from Michigan that other cases of the disease had broken out in Wayne County and in Detroit. The information received also connects the Wayne County outbreak with the same Russian immigrants. It occurred in the person of a German immigrant, who had entered Michigan *via* the St. Lawrence and Ontario, between the 15th and 20th of May, and must therefore have travelled west, probably in the same car or stayed at the same immigrant sheds as did the aforementioned Russians. Cases in Illinois are also stated to have occurred about the same time in immigrants who had passed through Canada. The following particulars regarding these cases have been received. (*Vide next page.*)

Having become convinced of the dangers to which the Province must be continually exposed, as only too well illustrated by the instance just given, it became apparent to me that the first point to be gained, if protection against the danger of the introduction of disease by immigrants was to be prevented, was to point out in a thorough manner the exact nature of the quarantine service at that time in operation, and by pointing out its deficiencies to better enable the Board, and through them the Government, to make such representations to the proper authorities as would best serve to promote reforms and improvements. This was done in my report to you of the quarantine system of the St. Lawrence, which you were good enough to approve of and adopt. The occurrence of these outbreaks of the disease along the line which has, and must still more, become the main avenue by which immigrants can reach the new lands both of Ontario and the Northwest, and the publication of the report on the quarantine system of the St. Lawrence, adopted by the Board, both had their influence in obtaining the passage by Order in Council, approved Aug. 5th, 1886, of new and stringent quarantine regulations which, with some exceptions, are such, if thoroughly carrried out, as will materially lessen the dangers of the introduction to the Dominion of cases of Smallpox from abroad.* Certain

* QUARANTINE.

SUPPLEMENTARY REGULATIONS ISSUED FOR THE DOMINION.

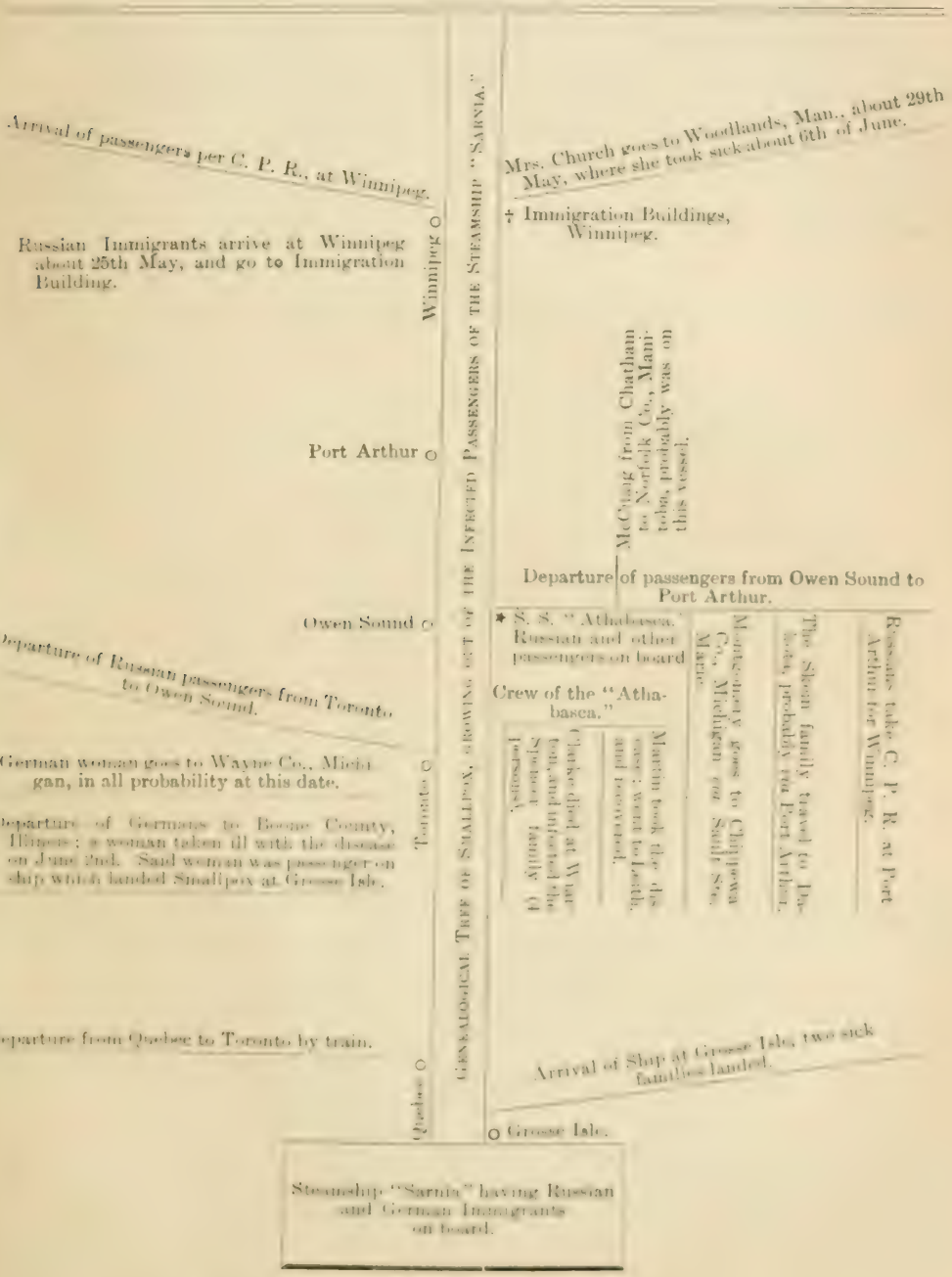
OTTAWA, August 7, 1886.

The following is the full text of the Order in Council providing for supplementary quarantine regulations : —

Whereas our Governor in Council, in view of the existence of the disease of Asiatic Cholera in parts of the Continent of Europe, and the disease of Smallpox in the United Kingdom, deems it advisable to adopt regulations to prevent the introduction of the same into Canada, and has been pleased to order that a pro-

GENEALOGICAL TREE OF SMALLPOX GROWING OUT OF THE INFECTED PASSENGERS OF THE STEAMSHIP "SARNIA."

Summing up these various outbreaks, which may have owed their origin to certain Russian immigrants, some of whose fellow-countrymen and fellow-passengers had been left sick at Grosse Isle, and which, until further rebutting evidence is produced, we shall assume did owe their origin to said infective cause we have :—


GENEALOGICAL TREE OF SMALLPOX, GROWING OUT OF THE INFECTED PASSENGERS OF THE STEAMSHIP "SARNIA."
Arrival of passengers per C. P. R., at Winnipeg.
Winnipeg
Russian Immigrants arrive at Winnipeg about 25th May, and go to Immigration Building.
Port Arthur
Owen Sound
Departure of Russian passengers from Toronto to Owen Sound.
Toronto
German woman goes to Wayne Co., Michigan, in all probability at this date.
Departure of Germans to Boone County, Illinois : a woman taken ill with the disease on June 2nd. Said woman was passenger on ship which landed Smallpox at Grosse Isle.
Departure from Quebec to Toronto by train.
Quebec
Mrs. Church goes to Woodlands, Man., about 29th May, where she took sick about 6th of June.
† Immigration Buildings, Winnipeg.
McCraig from Chatham to Norfolk Co., Manitoba, probably was on this vessel.
Departure of passengers from Owen Sound to Port Arthur.
* S. S. "Athabasca. Russian and other passengers on board
Crew of the "Athabasca."
Russians take C. P. R. at Port Arthur for Winnipeg.
The Sloan family travel to Duluth, probably via Port Arthur.
Montgomery goes to Chippewa Co., Michigan, via Sault Ste. Marie.
Marion took the disease : went to Leith, and recovered.
Clarke died at Warton, and infected the Spencer family of Jefferson.
Arrival of Ship at Grosse Isle, two sick families landed.
Grosse Isle.
Steamship "Sarnia" having Russian and German Immigrants on board.

delays occurred in the issue of the instructions to the pilots and quarantine officers, and as a consequence, I learned through official channels, that up to October but few vessels had complied with the regulations requiring them to report at Grosse Isle. Fortunately, the absence in unusually large degree of Smallpox in those European countries, from which most immigrants come to Canada, as well as the fewer arrivals in the later part of the season, have lessened the dangers incident to the imperfect carrying into operation of the new regulations; but if the Grosse Isle station is so equipped as to have a working staff for all the hours of the day, there can be no good reason why, with the recent addition of a steam yacht fitted up with all modern disinfecting appliances, the regulations should not next season be carried out without vexatious delays or loss to the shipping companies in any cases other than those where delay, through the presence of disease on board, is necessary and compulsory, and yet with a thoroughness compatible with the almost complete removal of probable dangers from this external source. It is to be hoped that the activity shown by the Department this year in these matters is indicative of an accelerated progress during the coming year.

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clamation do issue putting in force the following regulations, supplementary to the quarantine regulations established by the proclamation of May twenty-third, in the year of Our Lord, one thousand eight hundred and sixty-eight, and January twenty-first, in the year of Our Lord, one thousand eight hundred and seventy-three, that is to say:—

For Steamships and Sailing Vessels by the St. Lawrence.

1. Every steamship and sailing vessel from any port outside of Canada coming to Canada by way of the St. Lawrence shall be inspected by a duly appointed Quarantine Medical Officer or officers before passing Grosse Isle, and shall not proceed or be allowed to proceed on her voyage until she receives a clean bill of health.

2. Each of the weekly steamships conveying Her Majesty's mails shall be met and inspected by a Quarantine Medical Officer at the Port of Rimouski, and a clean bill of health from such officer shall be equivalent to a clean bill of health granted by the Quarantine Officer at Grosse Isle, such mail vessels being amenable in all other respects to the quarantine regulations.

3. No passenger or any other person shall be allowed to land from any mail steamship at Rimouski until declared free from contagious disease by the quarantine medical officer.

4. Any person or persons ill with Cholera, Smallpox, or any other contagious disease, as defined in the quarantine regulations under the proclamation of May 23, 1868, shall be landed at Grosse Isle for treatment, and the vessel disinfected and allowed to proceed or be detained in such manner as may be deemed expedient by the medical superintendent for the protection of the public health, under the provisions of the said quarantine regulations.

5. No person shall be allowed to land from any steamship or sailing vessel without furnishing evidence to the satisfaction of the Quarantine Medical Officer of having been vaccinated within the seven previous years, nor any person not vaccinated to the satisfaction of the Quarantine Medical Officer.

6. Any unvaccinated person arriving at Rimouski or Grosse Isle shall be vaccinated by such Quarantine Medical Officer, or in the event of refusal shall be landed at Grosse Isle subject to a quarantine of observation.

7. The Quarantine Medical Officer at Grosse Isle or Rimouski shall examine any officer or surgeon or medical man of any steamship or sailing vessel, under oath, touching the state of health of such ship or vessel and of every person on board, in such form as shall be prescribed by the Minister of Agriculture.

8. Every steamship or sailing vessel arriving with infectious disease shall be liable to be detained at the quarantine station for disinfection, together with its cargo and passengers and crew, but every steamship or vessel provided with one isolated hospital for men, and another for women, on the upper deck, ventilated from above, and not by the door only, may, in the discretion of the Quarantine Medical Officer, if he is furnished with satisfactory evidence that such hospitals have been promptly and intelligently made use of, be allowed to proceed after the landing of the sick and the disinfection of such hospitals; any vessel, however, arriving with infectious disease, without having such special isolated and ventilated hospitals, shall be liable to be detained for disinfection at the quarantine station.

9. The master of every steamship or sailing vessel liable to quarantine shall produce a certificate of such inspection, and a clean bill of health, but so being allowed to make a customs entry at the ports of Quebec and Montreal.

10. The inspecting physician at Quebec shall visit every steamship and sailing vessel from any port outside of Canada arriving at that port, and he shall send back to Grosse Isle any steamship or sailing vessel having on board contagious disease in contravention of the foregoing regulations.

For all other Organized Quarantine Ports of the Dominion.

11. Every steam and sailing vessel from any port outside of Canada arriving at any regular organized quarantine ports (having quarantine stations), that is to say: At Halifax, Pictou, or Hawkesbury, or Sydney (Cape Breton), in the Province of Nova Scotia; or St. John, or the harbour of Miramichi, in the Province of New Brunswick; or Charlottetown, in the Province of Prince Edward Island; or Victoria, in the Province of British Columbia, shall be subject, in so far as they can be made to apply, to the foregoing regulations relating to Grosse Isle, as respects inspection, by the Quarantine Medical Officers at the said several ports or harbours, before being allowed to make a customs entry; and any vessel which it shall be considered necessary to detain shall be dealt with in accordance with the quarantine regulations of 1868, aforesaid.

With regard to the internal condition of the Province as regards preparedness for outbreaks of Smallpox, I can only say that in many municipalities it is everything that can be desired, the Local Boards being well organized and hospitals for possible cases being still in existence. Other municipalities, again, would seem to have become temporarily exhausted through the extraordinary efforts put forth by them during the panic of last autumn, and, like the vine-dressers who have escaped from the slopes during an eruption of Vesuvius, return, apparently unmindful of past danger, to a resumption of their deserted abodes, abandoned tasks and former habits. It was hoped by the Board that the Vaccination Act submitted to the Government at last session of Parliament, would have placed the Board in such a position as that it could, with much exactness, keep itself informed of municipal work in the direction of vaccinal protection of the new-born at least. In this it has been disappointed, for, although an improvement in the operation of the Vaccination Act of the Revised Statutes has been made as far as relates to the anomalous position previously occupied by Local Boards in the matter of enforcing vaccination, nevertheless the option of having the law carried out is still left, except during epidemics, wholly in the hands of the municipalities, with the usual result, that, only here and there, has any official attempt been made during the present year to carry out the law as relates to vaccination. Were the municipal health authorities active in the matter, a fair degree of protection to the general community might be expected to follow; but with the absence of any Act for enforcing a general provincial yearly vaccination, we shall expect, as we have been taught by past experience, that every year cases will here and there occur,

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For all Ports under Quarantine Directions of Collector of Customs.

12. At every other port in Canada, at which there is not a regularly organized quarantine station, and at which the Collector of Customs is authorized by the Act 35 Victoria, chapter 27, entitled "An Act relating to Quarantine," and the proclamation made in pursuance thereof, dated January 21, 1873, to act as quarantine officer for putting into effect such regulations, the Collector of Customs shall, in the case of any steamer or sailing vessel arriving from the Continent of Europe or the United Kingdom, cause a medical inspection to be made of any such vessel, and shall not grant a customs entry, except upon the production of a clean bill of health after such inspection.

13. In the event of any contagious disease being found on any steam or sailing vessel arriving at any port which is under quarantine direction of a Collector of Customs, such cases shall, in all respects, be dealt with in the manner prescribed in the quarantine regulations of January 21, 1873, aforesaid, applying to such ports, supplemented by the foregoing regulations in so far as they can be made to apply.

Signals for Sickness to be Displayed at all Ports.

14. Every steam or sailing vessel from a port outside of Canada having any contagious disease on board, shall, on arriving at any port in Canada, display a flag in the fore-shrouds, or a yellow flag at the fore, for a distinctive quarantine signal, in order to inform the Quarantine Officer, or Collector of Customs acting as such, that he is to receive the sick from such vessel, or to take such other steps with respect to such vessel as are prescribed by the quarantine regulations aforesaid, or requiring quarantine inspection at Grosse Isle.

How Rags are to be Dealt with.

15. Rags shall not be allowed to land at any port in Canada, except at a port which is one of the regularly organized quarantine stations hereinbefore specified in section 11.

Rags shall not be allowed to enter or pass beyond the limits of the quarantine grounds until disinfected by such process or processes as shall be ordered by the Minister of Agriculture, or unless specially directed by the Quarantine Medical Officer.

The definitions in the proclamations of 1883 and 1884, respecting rags, continued in force by the Order in Council of October the 18th, 1884, are withdrawn.

Hours of Inspection.

16. The hours during which quarantine inspection, the mail steamships excepted, shall take place at any quarantine station or any port in Canada shall be between the hours of sunrise and sunset.

Penalties for Pilots and all Officers and Masters of Vessels.

17. Every pilot shall be furnished with printed copies of these regulations, one of which it shall be his duty to hand to the master of every steam and sailing vessel coming from a port outside of Canada, under a penalty not exceeding two hundred dollars.

18. Every Collector of Customs, officer or other person charged with putting into effect or having any duties in connection with the foregoing regulations shall be liable to a penalty not exceeding four hundred dollars and imprisonment until such penalty is paid for any contravention of such regulations, or for omission or neglect of duty in relation to them.

19. Every master of a steam or sailing vessel shall be liable to a penalty not exceeding four hundred dollars, and to imprisonment until such penalty is paid for any contravention of any of the foregoing regulations, and such vessel shall be held liable for any pecuniary penalty imposed on the master.

until another generation of unvaccinated children have grown, when an outbreak under favoring circumstances, as in Hungerford, will occur with the loss of many lives and the accompanying heavy financial expenditure. It is somewhat re-assuring, however, to know that almost everywhere the people have been so taught by the experiences of the last year or two, supported by stringent regulations, of how first cases can be quickly rendered harmless by isolation and early vaccination of those exposed, as that under ordinary conditions the disease is not likely for years to become a large factor in the mortality of the Province. This activity of Local Boards is a good evidence both of the appreciation of the good protective effects of isolation, and of acquiescence in the strict provisions of the statutory law and regulations in regard to the disease. It was so well illustrated in the instance of the health authorities of Owen Sound and of the several neighboring municipalities, into which the two cases of Smallpox from the *Athabasca* had passed, that I cannot do better than give here the report of Dr. Allan Cameron, Medical Health Officer, Owen Sound, as showing how the existence of our Boards, especially when there are Medical Health Officers, are the conditions of complete success in stamping out incipient epidemics of disease:—

(Copy of Report to Local Board of Health at Owen Sound.)

June 9th.—First heard rumor of Smallpox in Wiarton.

June 10th.—Report corroborated and on enquiry find that John Clarke, who had lately been employed on the steamer *Athabasca*, went from Owen Sound and died with the disease on the 9th inst. Also heard of a young man by the name of Wilson, a chum of Clarke's, and who was living in Owen Sound, is reported to be sick from Black Measles, but on enquiry find it not to be correct, as he is at present in good health.

June 11th.—Received telegram from Dr. Sloan to meet him at Leith that day (Friday.) On arriving we proceeded to the house of Peter Cameron and found a genuine case of confluent Smallpox in the seventh day of eruption on a young man, who had lately left employment on board steamer *Athabasca* and also was taken ill shortly after coming home. This evening (Friday) acquainted Mr. Taylor, station master, of the circumstances, who immediately telegraphed to Mr. Beattie, Manager of C. P. R. steamers. Also directed postmaster here to notify the postmaster of Leith, not to mix any mail matter from within infected house with the other contents of the mail bag.

June 12th.—Informed Detective Smith on his arrival of all the circumstances and in evening met Mr. Beattie. In obedience to a telegram from Dr. Bryce, I boarded the steamer *Atlantic* on her arrival this evening about 7 p.m. On inspection of the purser's book and from other information, I find the rumor of her having carried the sick man (Clarke) from the Sault Ste. Marie to Wiarton to be incorrect. After inspection of the crew, the boat was allowed to depart.

June 13th.—Ascertained to-day that the sick man Clarke was driven from the American hotel to the steamer *Pacific* on the 2nd of June. All those in the above hotel, who had not recently been vaccinated, complied to the number of twelve, and on the arrival of the steamer *Pacific* at 11:30 p.m., I presented telegram of Dr. Bryce's to Captain Campbell, who took advantage of the technical error in regard to name and declined me to detain him. The purser's list for the 2nd of June contains the name of George Clarke, point of departure, Owen Sound, destination was Wiarton. The Captain holds, that as his crew were passed by the American ports last fall, consequently all are vaccinated sufficiently. Finding that reasoning with the Captain was useless, I left and on going home, wrote a full statement to Dr. Bryce and had it forwarded by Detective Smith on morning train to be immediately delivered on his arrival in Toronto.

June 14th.—The steamer *Athabasca* arrived about 10.30 a.m.; found the passengers, who left the boat, looking well, with exception of one lady who had consumption. Inspection was made of the crew, forty-five in number, thirty-five of whom were vaccinated and the forecastle was thoroughly fumigated with sulphurous acid gas. To-day I received the balance of 100 vaccine points, sent by order of Dr. Bryce from Dr. Stewart, of Palmerston.

June 15th.—Received letter from Dr. Caverton regarding the appointment by the Township Council of a Medical Health Officer, which was immediately attended to by informing Mr. George Allen of the request of the Provincial Board of Health.

June 16th.—Informed Dr. C. E. Barnhart of the rumor that four or five cases of Smallpox existed about six miles from Owen Sound, in the Township of Sarawak, said to have originated from a man by the name of McMillan, who left the steamer *Athabasca* at some time on the race from Leith and Wiarton.

June 19th.—Received postal card from Leith, dated 18th, reporting case improving. No new cases.

June 21st.—Postal card of date 19th June was received from Mr. C. V. Parke, stating that no new cases existed in Wiarton. On arrival of *Athabasca*, crew were disinfected and found some three men somewhat sick, apparently from vaccination. Six of the crew were vaccinated. To-day is pending it is reported that two new cases had appeared at Leith, but as yet the report lacks corroboration.

June 28th.—Again visited steamer *Athabasca* on her third arrival and find her crew all healthy, with exception of a few sore arms. Proposed to Mr. Beattie the advisability of having immigrants pass inspection at Toronto, as the best safe guard against a second outbreak.

Received word from Dr. Sloan, of Leith, as first case in August, stating the man Cameron had recovered entirely.

ALLAN CAMERON, M.D.

As will be seen by the following the captain of the *Pacific* was not allowed to continue his evasion of the law.

(*Telegram to Dr. C. W. Covernton, Chairman Provincial Board of Health*)

COLLINGWOOD, Ont., June 16, 1886.

I have vaccinated officers and all hands on the *Pacific*.

ALEXANDER R. STEPHENS, M.D.

Equally thorough to an extent beyond what by many might be deemed necessary were the measures taken in Wiarton, where the man Clarke from the *Athabasca* had gone, as given by Dr. R. M. Fisher, Medical Health Officer, and still more fully in the following letter of T. D. Galloway, Secretary of Board, and Sanitary Inspector, Wiarton.

WIARTON, 12th August, 1886.

P. H. BRYCE, Esq.,
Secretary Public Board of Health of Ontario, Toronto.

DEAR SIR,—I beg leave to ask you by return mail in regard to the following, that is to say: we have liberated our Smallpox patients and all is doing well. Have stamped the disease thoroughly out; but am afraid we are going to get into trouble with them for so long detention, but on the other hand we have supplied their wants with provisions and medical and other attendances. Still they appear not to be pleased for all. Are we bound to replace at the expense of this corporation all clothing and other domestic animals such as pigs, dogs, etc., that were burnt at the time of the death of the young man Clarke. We are getting in our bills for the medicine, provisions, etc., which will be very high. Also we burnt down a cow stable with the animals, also the clothing that was in the room where the young man Clarke died. We are to have a meeting of our Local Board of Health on Monday next, the 16th inst., and would like to have your answer to what I have asked from you so that you can guide us in settling with the parties on the best possible terms. From the conversation we have had with them since they got their liberty they are going to be a little ugly on our hands after all that our Board of Health has done for them. Let me have your reply before Monday if possible and oblige.

I am, your obedient servant,
T. D. GALLOWAY,
Secretary and Sanitary Inspector Local Board of Health, Wiarton.

2. *Scarlet Fever, Measles and Whooping Cough.*—Owing in part to the fact that these diseases are generally more or less prevalent in the Province, sometimes endemically and often as localized epidemics, and in part to the fact that we have not during the past year been in the habit of getting weekly returns of disease with any degree of regularity from reporters in different parts of the Province, I am not in a position to state to what degree, as compared with other years, these three diseases have been prevalent.

During the winter of 1885-86 reports from time to time showed that Measles was prevalent in many places. The fact of the nature of the disease being in most cases well known to many of our people, the wide prevalence of the old idea that it is better that children have the disease when young, and have it over as it were, as well as its comparative mildness as regards life, in those instances where care is taken and the sanitary surroundings are good, all tend to make attempts at limiting its spread in a community, on the part of health authorities generally, imperfect and perfunctory—if indeed they are made at all. The same statements may be made with reference to Whooping Cough. In addition to what has just been said regarding Measles, as relating to Whooping Cough, it may be again repeated as was remarked in last year's report, p. 53, 1885: "It would appear as if public sensibilities in regard to the dangers which may attach to the disease, will require to be greatly accentuated before it can be expected that the people of our communities will undertake the serious labour connected with the practical isolation from day to day for a succession of weeks, of any child or children in the houses affected with this disease. In the rural districts this would prove an easy matter, but in the thickly peopled streets of our cities the task, with the present sentiment on the matter, has too many practical difficulties for it to be expected that anything less than severe legal penalties could cause the law regarding its isolation to be enforced."

For whatever reason, the prevalence of Scarlet Fever, during the past several years, has, taken as a whole, been unusually small in this Province, while there can, I think, be but little doubt that owing to the general advance, both in the attention on the part of

the people to their sanitary surroundings and to the better attention to individual hygiene, as well as to the advance of medical science, the fatality from this disease in Ontario has been tending to growing yearly less. To illustrate this fact, as well as to point out what has been an axiom in Great Britain where, for many years accurate death registrations have existed, viz., that this, with other zymotic diseases, appears in cycles in epidemic form, in consequence of there having grown up in the meantime another generation of children unprotected against its ravages, I have examined the registrations in Ontario from 1871 to 1885, with the following results :

Table showing deaths from Scarlatina :—

Year.	Deaths.
1871	630
1872	642
1873 1874 1875 1876	300 (or below.)
1877	717
1878 1879	300 (or below.)
1880	409
1881	470
1882	543
1883	405
1884	382
1885	314

Thus we gather from the table that there was, in every returning semi-decade, an increase of deaths, as seen in 1871-2, in 1877, in 1882; but the returns so far for 1886 do not indicate any likelihood that 1887 will follow the law of previous fifth years.

The other fact mentioned is seen in the very decided decrease in deaths since 1877, for, although an increase as usual occurred in 1882, the total deaths during that year were only 543. A fact which will be more fully referred to in the paragraph on Diphtheria may be mentioned here, viz., that during the earlier years of the publication of death returns, Diphtheria did not appear amongst the ten highest causes of death in Ontario, and that not until 1876 do we find it advanced to this position. In 1877 both Diphtheria and Scarlet Fever are found amongst the ten highest causes of death, both being unusually high, 964 and 717 respectively. From this we would seem to have established the existence of that relationship so often claimed by physicians, were it not for the fact that in 1878, Diphtheria rose to 986, while Scarlet Fever dropped below 379. Whether, however, the more or less constant increase of Diphtheria in late years may in any way be connected with the almost yearly decrease of Scarlet Fever, will require further observation before any definite conclusion can be arrived at.

In view of these facts, apparently going to show that the disease is not virulent to the same extent as in many other countries, or as it was in this some years ago, it would seem not unnatural that less alarm should be felt and less activity shown in isolating the disease, on the part of Local Boards of Health, than is the case with Smallpox or Diphtheria. It will be gathered, however, from the following selected correspondence, that our Boards are made to feel, in some instances, that the eyes of an intelligent public are upon them, and that use will be made of the powers given to the people under the Health Acts to demand protection from these diseases when they break out :—

DR. P. H. BRYCE. WINDSOR, ONT., June 9, 1886.

SIR,—In answer to your telegram of yesterday, I have the honour to inform you that there are three houses infected with scarlet fever in Walkerville, with the number of six patients; the houses are placarded and the Board of Health is endeavouring to cut short the spreading by strict isolation as far as the Board can carry its regulations. Enclosed please find the By-law passed April 19th, 1886, which will show you that the municipality is doing its duty.

Yours, respectfully,

CHARLES E. CASGRAIN, M.D.

WINDSOR, June 7, 1886.

P. H. BRYCE, ESQ.,
Secretary Provincial Board of Health, Toronto.

DEAR SIR,—Herewith I have the honour to place before you a resolution of the Windsor Board of Health passed on Saturday evening last.

Yours very truly,
STEPHEN LUSTED,
Secretary.

Copy of Resolution.

Moved by Dr. Coventry, seconded by Mr. M. A. McHugh, That on account of the prevalence of scarlet fever in Walkerville, the closing of the public school at that place in consequence thereof, and the absence of any adequate steps taken by the Municipal authorities of Sandwich East to guard against the spread of the disease, the Windsor Board of Education be requested to exclude from the schools of this town all children resident of Sandwich East (of which township Walkerville is a part), unless they, in each case, produce a certificate from a regular medical practitioner that they are free from scarlet fever and have not been exposed to that disease. Also, that this resolution be communicated to the Secretary of the Provincial Board of Health, with a request for the co-operation of that Board.

ALMONTE, ONT., June 4, 1886.

DR. BRYCE, Toronto.

DEAR SIR,—Our Municipal Council has been unable to get a Board of Health this year. They made some appointments, but the three ratepayers resigned and they found it impossible to get any one to act. I understand that you are Chairman of the Provincial Board of Health, and I would like to have some instructions what should be done in the matter. Scarlet fever is existing here, and I am afraid that it may spread, and if it does there is no Board of Health to attend to any epidemic. I should like to have a reply by return of mail.

Yours truly,
A. M. GREIG,
Mayor.

ALMONTE, ONT., June 8, 1886.

Dr. BRYCE,
Provincial Board of Health, Toronto.

DEAR SIR,—Your telegram duly received yesterday. We had a meeting of our Council last evening and I did not answer telegram, as I thought action might be taken by the Council in the matter. I threatened to carry out your suggestion in telegram, and as the Council feared expense they met the matter manfully and I think we will now have a Board of Health all right. I have to thank you for your telegram, as it was the lever that moved the corporate body to more energetic action.

Yours truly,
A. M. GREIG,
Mayor,

LANARK, July 30, 1886.

P. H. BRYCE, Esq.,
Secretary Provincial Board of Health.

DEAR SIR,—A case of scarlet fever occurred in a house in this village about five weeks ago. The patient was a girl about four years of age on a visit here and whose parents reside in Perth where scarlet fever prevails to a large extent. The Board of Health placarded this house and engaged a man to attend to any errands outside that might be required, and who charged the Council $1.25 per diem for his services. Can the Board or Council collect this amount from the father of the patient, who resides in Perth, and who came to some members of the Board and said they should appoint a man to wait on the household and do their errands, or can we collect it from the owner of the house where the patient was staying? The Board met with such opposition from both the father of the patient and the head of the household, where the fever was, that they wish to make some of them repay the cost of the man who was employed, and would prefer to make the father of the patient pay if liable, as he acted and talked in a scandalous manner on account of the preventative measures the Board used to prevent the spread of the disease.

Yours truly,
W. A. FIELD,
Secretary.

MIDDLEVILLE, Sept. 23, 1886.

MR. P. H. BRYCE, M.D.

DEAR SIR,—Will you please let me know if the Local Board of Health has power to prevent a mail courier (under contract with the Dominion Government), who has a number of cases of scarlet fever in his family, from carrying mails, or can they compel him to find a substitute? An early reply will oblige,

Yours truly,
ARCH. RANKIN,
Secretary Board Health.

LANSDOWNE, ONT., March 3, 1886.

The Secretary Provincial Board of Health.

DEAR SIR,—There is no Board of Health in our township and I take the liberty of asking you to whom application has to be made to establish a health officer in our township. There is a great deal of scarlet fever in our midst, of a very malignant type, and nobody seems to have any authority to compel the Trustees to close the schools, and very little, if any precaution at funerals is taken—or isolation; nothing in fact to prevent the spread of the disease. I have tried to do all I can, but it needs some one having authority to carry out the necessary regulations, and our township should not mind the small expense connected with the establishment of a Board of Health. Our doctor, Dr. Hanna, says that he has no authority to close the schools, but he, as well as I, have urged the necessity of closing. Only to-day one child was buried, and whilst away at the cemetery another one in the same house died of the same disease—scarlet fever—and yet people are so careless, and go to the house as though there were nothing amiss.

I remain,

Respectfully yours,

P. S.—If you have any instructions written for the public in reference to scarlet fever, please send me some, as I will gladly see to their distribution.

Diphtheria and Typhoid Fever.—From time to time throughout the year, reports from different localities have been received stating that outbreaks of either one or other of these diseases had occurred. Regarding the prevalence of Typhoid, if one were to judge from reports, there would seem to be little doubt but that the Province had this year enjoyed unusual immunity from its ravages. Nevertheless, the absence of any systematic series of local reports, except Annual Reports, makes it somewhat difficult to judge the prevalence of these endemic diseases until a year after their occurrence, by means of the report of the Registrar-General. The annually increasing number of properly organized Local Boards, and the increasing number of Medical Health Officers and Sanitary Inspectors, are, however, making the possibility greater of obtaining better information, within a short period, of the actual condition of health in our municipalities at any time when there seems to be, in any great degree prevalent, any of the common zymotic diseases. The Annual Reports, called for by law, of the Local Boards, which are greatly increasing in number and comprehensiveness, are sources of information more or less exact, according to the activity of the health authorities, and especially of the Medical Health Officers. As will be seen by consulting reports contained in the Appendix, Typhoid, though occurring in the different cities, does not appear to have been of the usual character, either in amount or severity during the year, but its diminished prevalence has been more than counterbalanced by the presence everywhere of Diphtheria. What the conditions are which determine the prevalence of Typhoid and Diphtheria respectively, are not as yet so definitely determined as to enable us to completely point out the different evils which must be remedied to prevent either one of them; but it would seem that, judging from our numerous Annual Reports of Local Boards, similar causes are set down as producing definite effects in outbreaks of Typhoid, or of Diphtheria, or of both. In Brantford, for instance, a canal basin, dry from the breaking away of a dam with the spring floods, and which receives sewage from various public and private drains, is represented as being the cause of numerous cases of fever, many of a Typhoid character; and in another outbreak, cans containing milk supplied to those families, had been rinsed with water from a well situated eight or nine feet from a manure pile and cow stable. In Galt, the impurity of well water in the lower parts of the town is represented as being a factor in the prevalence of Diphtheria and Typhoid. The Medical Health Officer of Guelph reports that many wells are too near the privies, that many of them are in addition polluted by surface water running into them, points out the danger of contamination from these sources and urges attention to the disposal of house refuse in ways other than throwing it on the ground. In Lindsay, Diphtheria prevails and the Medical Health Officer, in pointing out and urging the necessity for isolation and disinfection in such cases, states that "in no single instance did the disease appear *de novo* in dwellings properly drained and in which dry earth closets were used; and in no dwelling sanitarily perfect, where ordinary precautions were observed, did the disease extend to a second member of the family." One case is cited in which there was an exception to this. In this instance, after the re-appearance of the disease, examination revealed an untrapped drain connecting with the public sewer

and opening into the cellar. This remedied, no new cases occurred. The Medical Health Officer of London says:—"Diphtheria and Typhoid prevailed to some extent in the 5th ward, where drainage is defective and well water in consequence notoriously bad." Further referring to an open drain in London East, which receives sewage from drains and privies, he says:—"This drain or ditch is the cause of a great deal of the sickness in that neighbourhood."

Thus reports everywhere state, with painful iteration, the continued reign of filth, or to put it in terms already used, "the microbes concerned in the decomposition of dead organic matter appear, under certain favouring conditions of the physical system, of climatic and meteorological conditions, to be capable of producing diseases of a septicaemic character from what is commonly called malaria, through varying grades of morbid conditions to the most malignant forms of Diphtheria and Typhoid fever." It will not fail, however, to be remarked by a perusal of appended Annual Reports, to how great an extent our municipal authorities and the people generally are waking up to the necessity for both municipal and personal cleanliness as regards premises, and with the prominence given by the Medical Health Officers to the necessities of public water supplies and systems of sewerage, we may well feel pleased at the progress being made everywhere by public health work.

In the matter of outbreaks of these diseases, however, it will be noticed that reference is frequently made in the Reports to the imperfect notifications of zymotic diseases, to the partial isolation and disinfection carried out, and the dangers resulting from the attendance of children from infected houses in the public schools. While recognizing the many difficulties in isolating the heads of families from the general public, there cannot be any difference of opinion as to the duties of the school and health authorities in the matter of children attending school. Diphtheria, prevalent at the present time in the country, is being propagated constantly by this means, and only in a few instances are effective measures being taken for limiting it. Dr. Squire's remarks regarding isolation in Scarlet Fever and Diphtheria are especially to the point in this connection:—

"I maintain that in Scarlet Fever isolation is the only means of guarding against infection; we cannot provide for ourselves or others the immunity against this disease that vaccination affords against Smallpox. . . . How are we to provide by inoculation in a disease that is clearly self-protective? The only answer here, as in diphtheria, is by preventing the inter-communication of the sick with the healthy. Neglect of this leads, especially in schools, to the increase of diphtheria."

But intimately connected with this is the question of notification of infectious diseases. We have this demanded by law of practitioners, but it is not generally obeyed, and as pointed out by Dr. Edward Seaton, Medical Health Officer for Chelsea, London, Eng., one reason for it is that there is not in our cities, or indeed anywhere, an efficient sanitary service for dealing with such cases. He says:—"Unless there is in existence a proper sanitary service, but little good can be derived from notification, and statutory powers for its enforcement cannot reasonably be required."

These remarks, it will readily be seen, apply with even greater force in many municipalities in Canada where health organizations limit themselves still in large measure to the ordinary work of abatement of minor nuisances and street cleansing. With so many reports indicating the prevalence of Diphtheria, it would seem hardly possible to select from them illustrations of what are considered as the causes in the many instances where such cases have occurred. Suffice to say that there is everwhere abundant evidence that where the disease originates locally there are always readily found on the premises abundant existing causes to account for the outbreak. More extended reference to these causes will, however, be found in the study found in a later part of this report on the special subject of Diphtheria.

II.—Waste Organic Matters, and How to Deal with Them.

I. *Public Nuisances and Unsanitary Conditions arising from House-refuse, Sewage, Cattle-byres, Slaughter-houses, Diseased Meat, Cheese Factories and Creameries, Manufactories, etc.*—In various Annual Reports I have dealt with the nuisances arising from

these various causes in separate sub-paragraphs, and have indicated some of the difficulties which have arisen in the experience of Local Boards which have attempted to deal with them. I have likewise pointed out some of the results of personal attempts to suggest remedies in those instances in which it has become my duty to deal with these matters. While it is true that each nuisance has some elements peculiarly its own, it has appeared to me that we are likely to arrive more quickly at a solution of the difficult problems presented to us in dealing with these matters by at once viewing them as simply one question of *how to prevent* the evils arising from the decomposition of organic materials and refuse, the existence of which is a fact and necessity everywhere that life is. Allow me to recall to your notice a few of the matters which, within the past year and similarly previous years, have been brought to our notice, and to refer incidentally to others of importance in districts and cities with industries differing to these with which we have mostly to deal.

Beginning with those rural municipalities in which the major portion of our population is, we have reported, at both ends of the Province, extensive outbreaks of Diphtheria. I am in a position to state that, regarding the local conditions in Essex, the use of water from shallow basins, scooped out of a black, decaying vegetable mould on the top of a hardpan sub-soil, is a common custom, while, to make matters worse, these limited supplies are not always kept free from contamination incidental to the presence of farm animals. The contamination of drinking water by animal excrement is, however, a matter unfortunately too common in parts of the Province with less excuse than some of the low lands of the south-west. The farm-yard well often yields a supply of water for household purposes and for drink to the farm hands. The following, from a letter by Dr. Mann, of Renfrew, is to the point :—

RENFREW, 7th October, 1886.

PETER H. BRYCE, Esq., M.D.

DEAR SIR,—I am at present attending a family who reside in the country, in the Township of Bromley, in which there are two cases of Diphtheria and one of Typhoid Fever. During the time the member of the family now affected with Typhoid Fever was taken ill another member of the same family was affected with the same disease. I am anxious to ascertain for a certainty, if possible, the causes of the diseases above mentioned. In this family, to all appearances, cleanliness has been observed, and the surroundings are seemingly in good condition; but I find that for some time past the well from which the family have usually been supplied with water has been out of repair, and the water used for some time past has been taken from a well situated in a stable. The stable is very securely floored, and as far as the naked eye can see, none of the excretions from the horses have penetrated the flooring, which is composed of planks. The earth surrounding the surface of the well has not a disagreeable odor, but, on the contrary, is quite the opposite. I think that absorption must have taken place of the excretions. But in order to ascertain of the matter, I send you two specimens of water to have tested. The bottle labelled "house," contains water taken from the well situated in the rear of the dwelling, and the other bottle contains water taken from the well situated in the stable.

Yours truly,

J. MANN, M.D.

NOTE.—Qualitative examination of these waters showed both to be contaminated with chlorides, while that from the stable gave evidence of great organic pollution.—P. H. B.

But the farm-yard well water is not limited in its influence to the farmer and his family. The following instances are illustrative. Dr. Griffin, Medical Health Officer, Brantford, in relating the outbreak of a number of cases of fever in different families, says :—"It was found that in the second and third houses attacked, in which were seven of the ten cases, milk was obtained from the same salesman, and this milk was found to have an unpleasant taste. On visiting the dairy, it was found that the well from which water was got for rinsing the utensils, was only eight or nine feet from the cow stable and from a large heap of manure, in such a position that it was impossible that the well should not be contaminated."

James B. Russell, Medical Health Officer, in a report on an outbreak of fever in Glasgow from milk, refers to the condition of dairy farms. In one place he quotes a description of a well :—"The well, on which is a pump, is situated immediately behind the byre and is supplied from surface drain from neighbouring fields. It is dry in summer and then water has to be carted from a quarry hole about a quarter of a mile distant. Milk is only sold in winter, cheese-making being carried on during the rest of the year." Dr. Stevenson Macadam, after analysis, characterizes the wells of the same villages as

"much polluted and decidedly unwholesome, and should not be employed for drinking or the making of food," while Dr. Russell further says :—"The population of Fergushill is 587 ; of Bensley, 318. There have been, during the last two years, over 100 cases of enteric fever in these villages. It is the usual fate of every new-comer to have this 'fever of the place.'"

Remembering that many hundreds of farmers are now engaged in sending milk supplies to the cities and growing towns of the Province, it need not be shown that the dangers on the farm do not end there, but, as in Glasgow, are carried to our large centres. That more disease has not been traced to this source in Ontario is, perhaps, more through want of investigation of the cause of outbreaks of disease than of its absence.

But it is not our milk supplies, as coming directly to the cities, that alone are important sanitary factors. In Ontario there are some 800 cheese factories, which together have a product amounting to :—

Yrs.	No. of factories in operation.	Quantity. (lbs.)	Value.
1882.....	471	39,346,095	$4,259,141
1883.....	635	53,513,032	5,589,339
1884.....	751	66,939,573	6,998,889
1885.....	752	71,209,719	5,774,454

Remembering that not more than some six per cent. of milk is utilized in making the cheese, it is not difficult to comprehend that the disposal of the refuse whey, etc., from milk sufficient to produce, say 75,000,000 lbs. of cheese, becomes a question of serious difficulty. Remembering, too, that our rural municipalities number about 350, it will be seen that each has on an average two cheese factories ; but so far evidence, gathered from partial reports, goes to show that the persons or companies operating them conduct them practically in whatever manner they please. Fortunately the commercial element is powerful in causing most to wish to make good cheese, and comparatively enormous strides have been made, as seen in the following extract :—

Ten years ago the Dominion imported cheese ; last year the single province of Ontario manufactured 70,000,000 lbs., and exported to England alone cheese worth £1,400,000. Two or three years ago, Canadian butter was made at each farmstead, with every possible grade of care and negligence, science and ignorance, with the net result that a small portion was excellent, a certain quantity middling, and the bulk grading downwards to "very inferior." Two or three years ago co-operative dairying was started under the auspices of the Government and under the supervision of the Ontario Agricultural College. The idea of this system is that the farmers of a district possessing 500 to 1,000 cows among them, send their milk to a creamery. There it is treated in a most scientific manner by skilled hands, using the best machinery, the result being that butter is produced of a uniformly high quality, the farmer receives a better price, and the public a better article.

Nevertheless, as regards the results of the putrefaction of animal matters, lack of knowledge prevents, in large measure, an appreciation of its injurious results upon the quality of cheese and butter, and therefore of the adoption of measures for the removal of the nuisances arising from whey and from the presence of large numbers of hogs in the vicinity of the factories and creameries. Milk, more readily than any other food, is affected injuriously, and evidence of the most positive character is not wanting to show that bad water, unwholesome food, etc., cause sensible alterations in the qualities of milk.

Quoting from a report on Silos and Ensilage by the Agricultural Department of Privy Council Office, Great Britain, I find the following :—

"Disagreeable smell and taste are occasionally referred to as having been present in both milk and butter, which often disappeared upon reduction of the quantity of ensilage given. With reference to this objection, it is recommended that in feeding dairy cows with ensilage, much of it should not be near them during milking hours, and that persons so employed with it should wash their hands before milking."

So important, indeed, is this question of the characteristics of tainted milk, that it is most desirable that where so little has been known, every positive observation should be noted. I, therefore, would quote the following from a report on Milk Scarlatina, by

the Local Government Board, Great Britain. Dr. Cameron, who made the investigation, says :—

The Milk.—"In a specific disease affecting the constitution of the cow shortly after calving, it might be expected that the milk, being an animal secretion, would be in some way affected by the disease. Specific virus circulating in the cow's blood is obviously likely to contaminate the milk produced by her, and through this medium to convey the disease to human beings. Early in the disease the milk of cows suffering in this way, was described, 'ropy,' 'slimy,' or 'as thick as a pudding.' This condition of the milk may occur, it is said, even before the vesicles appear upon the teats and udder, or the eruption on the hind quarters. It shows itself in milk that may have been set aside for from six to twelve hours for the cream to rise, and it ought to be looked for in all suspicious cases of cow illness. In some cases when the cow is being milked, the first few 'draughts' of the teat may form thick or knotty milk, but afterwards there is nothing abnormal to be seen in it. In many cases there is nothing particular discernable about the milk as it comes from the cow; it flows freely, and looks exactly like ordinary milk. As the milk from this dairy farm was sent direct from the farm to the milk-shop, and immediately distributed to the customers, this peculiarity would not have had time to show itself; and, further, as the cream is now usually removed by 'separators,' this milk would not, in all probability, have been set aside for the cream to rise. In cases where, at a dairy farm, only one or two cows are suffering from a mild attack of the disease, this ropiness might not show itself if the milk was mixed with a quantity of milk from healthy cows, although this mixed milk might very well be capable of injuriously affecting those who consumed it.

"I believe that this ropiness of milk appears in several cow diseases. Its precise nature and the causes which give rise to it require careful investigation. It was particularly noticed and described to me by several persons as having been observed by them, about three years ago, in milk supplied from another dairy farm in the district, a few days before a severe outbreak of diphtheria among consumers of the milk. This ropiness of the implicated milk was the subject of much discussion at the time, and was attributed by the farmer to feeding the cows on too much clover hay. He admitted the fact of the ropiness of the milk, and took, he said, milk from each individual cow to see, if possible, which animal gave ropy milk, but he did not set the milk aside to stand awhile, and so failed to detect the culprit. Unfortunately, in this instance, several of the cows were removed and killed before there was a chance of examining them, and so an opportunity of gaining, perhaps, important information was lost. This outbreak was the subject of special inquiry and report by Mr. Power." [See Medical Officer's Report to the Local Government Board for 1883, p. 42.]

In a country so largely agricultural as is this Province, it is but natural that we should find that in matters other than milk supplies we have conditions in rural municipalities demanding intelligent observation and watchful care. Within the past two years in south-western Ontario, swine plague has appeared and has resulted in much financial loss to the owners of hogs. Introduced accidentally into the townships bordering on Lake St. Clair, in Essex, it has shown itself a zymotic of definite characteristics, and has given excellent opportunities for the study of the propagation of epidemic diseases. I am informed by Dr. Cowan, V.S., acting Dominion Government Inspector, that, in many instances, the cases where swine plague prevailed with greatest virulence were where organic accumulations, as of fish refuse, along the river or lake shore abounded, or on those farms where general neglect was most apparent.

Quoting from a report on Swine Fever in Great Britain, by Prof. Brown, Agricultural Department, Privy Council Office, I find it stated as follows :—

"Imperfect cleansing and disinfection of premises may be reckoned among the causes which have contributed to the continuance of swine fever, notwithstanding the operations of legislation which might have been expected to produce good results. Very frequently swine are kept in places which cannot be cleansed and disinfected effectually, so as to make them safe for the next lot of pigs which will be brought in, as soon as the place is declared free. Old, hard cotton rags with readily drying cement to cleanse of infection by any known process. The only course in such cases is to remove the infection-saturated timber and soil and submit them to the action of fire."

Apart from the points so thoroughly illustrated here of the supreme influence which organic filth has in perpetuating and intensifying zymotic diseases, the presence of "swine-plague" or "hog-cholera" in the Province has a peculiar interest from its intimate relationship to Typhoid Fever. Dr. Budd designated this disease "Typhoid Fever in pigs," and remarked "that the disease is attended and characterized by a peculiar ulceration of the intestinal follicles. So with the disease in the pig, it too is a Typhoid Fever, characterized and attended by a series of ulcerations of the intestines which are, in some respects, the very counterpart of the ulcerations found in the human intestine, so that the two may be regarded as exact pathological equivalents."

A peculiar but most important pathological condition has been remarked by Prof. Brown and others, inasmuch as it would seem to show something of identity in the effects of different enzymes or blood ferments. He says :—"In some cases the whole of the mucous membrane of the intestine was covered with a croupous or diphtheritic deposit of a dirty, white colour, and it was only after the deposit had been cleared away that patches of inflamed and perhaps ulcerated structure could be seen."

Still following up the evidence of the intimate relations of the decay of organic matter, with the development of other forms of disease, I would refer to the occurrence of glanders, primarily, in connection with unsanitary conditions of this nature. Veterinarians elsewhere, but also in Ontario, refer to the occasional occurrence of the disease of glanders, particularly in horses, and from time to time give such illustrations of its etiology and progress, as the following, taken from the Sixth Annual Report of the State Board of Illinois :—

"The infected farm of the late Wellington Conaway, distant about a mile and a-half from Coleta, was visited the same afternoon. While all the dwellings and outhouses on the farms for miles around bear evidence of prosperity and good taste, the dwellings and outhouses on the Conaway farm were remarkable for a very conspicious contrast to all the others. . . . The floor of the dwelling is raised about two feet from the surrounding surface, and there is a cellar underneath, full of putrid and decaying animal and vegetable matter, skeletons of hogs, dogs, etc., evidently the accumulation for years. A strong, penetrating, indescribable odour pervaded the dingy, filthy rooms in the house, in spite of a very recent sham performance of disinfection with chloride of lime, which was said to have been sprinkled here and there, but perhaps only in the room that was occupied by the deceased father and son during their brief illness. . . In the stalls were five horses of various ages, and in moderate condition as to flesh; otherwise they were dirty and rough-looking. One by one they were led out for inspection, and were found to be suffering with glanders in various stages of development."

As indicated by the context, there were two deaths in the family referred to, caused by glanders. The peculiar nature of the disease in its extreme contagiousness, owing to the location of the disease about the air passages, as well as in pustules on neighboring parts, as also the very high fatality in cases which do occur in man, marks it as one which deserves more attention that in Ontario has been paid to it as yet by sanitarians.

In the matter of another animal disease (pleuro-pneumonia), which has occurred in Canada during the present year, and which, from the long incubation and slow progress through its various stages, we cannot fail to see most important sanitary relations, I shall refer to an article in the United States Report of the Bureau of Animal Industries, by Dr. Ezra M. Hunt, of New Jersey; the situation of this State at the eastern terminus of a large portion of the east bound cattle trade, giving him peculiar facilities for obtaining practical experience in these diseases. He says :—

"Some of the roundabout tracings of an outbreak are as curious as they are annoying. Thus, in December, 1881, we lighted upon a herd in an out of the way locality, in Warren County, from which no other herd became affected. . . . . It had been brought directly by the purchase of three or four Alderney cattle in New York city by the owner of the herd, who lived elsewhere."

"In the same year a Children's Home on Staten Island suddenly came to have a deficient supply of milk, and was compelled, without knowing the cause, to change its source of supply. The herd was affected with pleuro-pneumonia. A Staten Island dealer in poor meat bought this herd at a very reduced price. Some of the sickest cattle were killed, while three others were privately boated over one night into New Jersey and sold as milch cows."

The occurrence of several epidemics of trichiniasis in European countries at different times from eating the meat of hogs, very naturally calls for some remarks in this connection. Very grave complaints were made in 1884, both in France and in Germany, respecting dangers arising from eating American pork. In consequence of the threatened prohibition of its entrance to these countries, the whole matter came to be looked into with an unusual degree of thoroughness. The results have been to show that all pork is liable to be more or less trichinosed. In 1,000 hogs examined in Montreal in 1883 by Prof. Osler, four per cent. were found infected, and Dr. F. S. Billings, Boston, reported the same per centage in 8,773 hogs examined. With such facts, and the possibility of severe and often fatal disease connected with their presence in pork, it will readily be seen that should it ever be found that pork, cooked in the customary fashion might cause the disease, there could be but one of two alternatives—either cease using pork as food, or having it cooked in some other fashion. It is, however, very comforting to find that when meat is well cooked, as it is by most English speaking communities, danger from this cause is slight. The danger varies to some extent with the method.

"Rupprecht observed that rapidly fried sausage only had an interior temperature of 53.5°C. and was still capable of producing infection. Cohen had a steak weighing half a pound heated for ten minutes when its appearance on cutting was white, without any red points. It still contained living trichinæ, however, which, being fed to a herd, were afterwards found developed in the intestine."

"Fiedler's experiments show that trichinæ are quickly killed at 62.5°C. (144.5°F), Fjord's investigations show that the interior of a ham weighing eight pounds reaches 65° C. after boiling two hours and seventeen minutes."

Brouardel and others have shown, however, that salting or curing of hams as commonly practiced, is in all cases where the curing has gone on for a number of weeks and months sufficient to destroy trichinæ. Brouardel found, however, in investigating (1883) outbreaks in Ermsleben, that there is a gradually lessening vitality of the trichinæ with every day the pork has been salted: thus: an animal was killed on the 12th of September, and of those who partook of this meat on the 13th, 33 per cent. died, while of those who did not eat of it till the 18th and 19th, none died."

All evidence pointed to the fact that this decreasing vitality of the trichinæ, as judged by results, was due to the slight salting. With such a proportion of trichinosed hogs, probably always present in the country, it becomes quite evident that, not only may their meat be eaten raw, but fresh sausages, a common form of preparing it, are by no means free from danger. Bacon may fairly be considered as being in quite a different category, as far as regards danger from eating it is concerned.

There is still one more important factor in this relation of the health of animals to the public health remaining to be noticed, viz., that of tuberculosis. The results of investigations during recent years into the cause of this disease, and especially since the discoveries of Koch, have been such as to draw the special attention of both medical men and veterinarians to the aspect of the disease in cattle as affecting the public health. The disease according to different observers, has been increasing year by year, especially in house or store cattle, increasing by those cattle kept in byres in towns and cities for milk purposes, and those of the pure breeds, in large measure stabled, and kept for breeding purposes or fed for the meat market.

The following are given as illustrative evidences of the prevalence of the disease:

Prof. Law states "that 29 per cent. of the adult males (cattle) dying in New York city, are tuberculous, and that in certain of the herds that supply that city with milk, 20, 30, and even 50 per cent., are affected with the same disease. In some country districts of New York can be shown large herds with 90 per cent. the subjects of tuberculosis. Were all the known facts published concerning the ratio of tuberculosis in certain communities, and in the herds supplying their meat and milk, there would be testimony far more telling than ever the striking example of New York city. One stands appalled at the immensity of this evil, covering as it does the entire country, threatening at every step the health of the community, and crying loudly for redress."

In view, therefore, of the prevalence of this disease in animals, I propose to give some of the principal conclusions which have been arrived at by some of the most eminent authorities in relation to the contagious qualities of the disease, and its relation to consumption in man.

In September, 1883, there assembled in the Fourth International Veterinary Congress, at Brussels, 311 veterinarians, and during the discussion on pulmonary phthisis, the following amongst many of the propositions were discussed. Prof. Lydtin, of Carlsruhe, presented the report of the commission appointed to consider this subject, and proposed amongst others the following resolutions for adoption:—

1. "Tuberculosis is transmissible hereditarily.
2. It is contagious.
3. It should be included among infectious, which should be opposed by measures of sanitary police.

(a). Every owner of domestic animals must report promptly to the authority charged with this police service every case of tuberculosis, and any exception causing suspicion of the existence of this affection; he must keep every animal attacked or suspected out of any place where it may be liable to transmit the malady.

(b). The suspected as well as the diseased animals should be sequestrated, and their slaughter ordered by the police; animals suspected of being infected should be kept in separation, unless there are comparatively few, in which case they should be slaughtered by official order. If a large number are suspected, they may be fattened and sent to the shambles as speedily as possible.

(c). Infected stables and other places should be under the special surveillance of the police for an entire year, counting from the last case of the disease. The sale of beasts suspected of infection should be interdicted, unless it is for slaughter, and under the inspection of a veterinarian.

(d). The place occupied by a tuberculous animal ought to be cleansed and disinfected, the animal having been previously removed; thought to be the same when the recently has disappeared from stables and other closed places in which tuberculous animals have been kept; it is only after disinfection that the prescribed police measures should be removed. During the whole course of the zootrosic the stables should be especially well ventilated.

(e). The flesh and viscera of a tuberculous animal can only be utilized for consumption when the disease is found in the earliest or its incipient stage, when the lesions are confined to a very small portion of the body, when the lymphatic glands are still free from all morbid tuberculous lesion, when the tuberculous formations have not yet undergone softening, when the flesh presents the characters of meat of the first quality, and when the animal is in a good state of nutrition at the time of slaughter.

It should not be permitted to remove the flesh of tuberculous animals, admitted to have consumption, out of the locality where they have been slaughtered, and it should not be offered for sale in the ordinary butcher stall.

Every quarter of meat and viscera showing lesions of tuberculosis, as well as the flesh of any other animal in which there is found at the necropsy a tuberculous infection more pronounced than that referred to above, should be watered with petroleum oil, and afterwards buried under police supervision. The extraction of fat by cooking and the utilization of the skin may be permitted.

(g). The milk of animals suffering from tuberculosis, or suspected of it, should not be consumed by man nor certain animals. The sale of such milk should be severely interdicted. The milk of animals suspected of infection should only be used after boiling.

(j). As a safeguard of the public health against the dangers which threaten it through the consumption of flesh furnished from diseased animals, of stale or putrid meat, and of falsified sausage and mince-meat, there should be established in every commune a competent service for the inspection of meats.

(k). Establishments which make a specialty of furnishing milk for invalids, or for infants, ought, as regards these milch animals, to be submitted to a constant control confided to veterinarians officially designated for this purpose."

Prof. Law, of Cornell University, remarks concerning cheese :—

"In recommending these resolutions for the adoption of the Congress, it has been felt that they are fully called for, in view of the danger which has long threatened the interests of stock owners and the health of the community, and which constitutes a veritable calamity.

He further says :—

"Again it agrees with other infectious diseases in being favoured by certain unhygienic conditions, as damp pastures, close, filthy buildings, over-crowding, poor food, excessive work or milking, etc., yet is not absolutely dependent on any one or more of these, nor due to these alone. . . . To the same effect speaks the great prevalence of tuberculosis in dairies near cities, where the stock is often changed, and new stock is being constantly purchased, and its almost complete absence from districts exclusively devoted to breeding, and never importing strange stock. This is but a repetition of what is known of other contagious diseases. Wild races, too, living in the open air, are largely exempt."

Prof. Law quotes from the report the opinion upheld by numerous high authorities that :—

"The morbific principle can enter the system either by the respiratory or digestive apparatus. The inspired air, and the forages and drinks can act as vehicles; it may also be transplanted by way of the generative organs, or by wounds, accidental or experimental."

Prof. Johne concludes :—

"That Tuberculosis can be transmitted from animal to animal, and from man to animal by feeding on tuberculous substances; but this mode of transmission is much less certain than by inoculation.

2. "The materials which most certainly transmit tuberculosis by gastro-intestinal injestion are tuberculous matter taken from the lungs, pleurae and lymphatic glands: milk of tuberculous animals, as regards its contagious properties, must be placed near to these. Infection by tuberculous matter taken from man is less certain than by that taken from animals."

"Toussaint found the tubercular lung products of cows constantly infecting to rabbits and pigs, after they had been subjected to 55°-58° C. in a water bath, and even after they had been roasted like a beef-steak in the gas flame. He found the nasal discharges, the saliva and the urine infecting and, as already noticed, the lymph of a vaccine vesicle."

Lydtin concludes :—

"That tuberculosis is contagious, like glanders or lung plague, and that contagion fills a more important role than heredity in the propagation of the disease."

Stang reports a "Case of the accidental infection of the son of healthy parents by the habitual drinking of the warm milk of a tuberculous cow."

Prof. Law says :—

"It is only necessary to add that tuberculosis in animals tends to concentration in the large dairies and feeding establishments which supply the great centres of population. The farmer, watching closely the animals he has owned since their birth, is led by the instinct of self-protection to sell off those that show symptoms of failing, and those usually go to the large establishments near the cities, there to be crowded in close buildings with many others, to which they in turn convey the infection. If in a dairy, these supply milk for the population at large, including the susceptible infants and invalids, and finally all or nearly all of such animals find their way to the butcher's stall, when they can no longer be utilized for other purposes."

As regards the use of tuberculous meat for food, Bouley insisted that the meat of tuberculous animals should be excluded from the food of man, whatever may be the stage of the tuberculosis or the apparent qualities of the meat. Van Hertsen, of Brussels, stated his practice at the abattoirs there to be to seize all except those carcases where the tubercles are localized and recent, and provided the carcase is sufficiently fat to guarantee good meat.

Having pointed out fully this disease in its relationships, as regards animals, we must return for a moment to its connection with the ordinary decomposition of organic matter. Mr. John Simon, C.B., wrote in 1867: "That vastly fatal disease (phthisis), if we are to have any proper knowledge of its causes, must be studied from many different points of view." His investigations shew it to be a disease "which undergoes development in proportion as men are gathered together in indoor industries." And again he says, "it is shown to be a disease which develops itself in proportion as men are dwelling upon a humid soil." Referring further to organic impurities, I would quote what I have written elsewhere regarding crowded apartments:—

"The insufficiency of oxygen, the excess of carbonic acid, and the volatile emanations of those inhabiting the place, and the frequently vitiating action on the lungs of air containing much dust and insufficient moisture, all tend to induce anæmia, catarrh and other derangements, which not only lessen the resisting power of the system to disease, but, also, by colds and catarrh, causing congestion of the mucous tract, produce just such conditions as form a *nidus* favourable for the reception and subsequent growth of bacillus tuberculosis."

Regarded, therefore, as a zymotic disease, it is apparent that in relation to it we have the same difficulties to deal with respecting its prevention as we have with regard to any other disease. As Miquel has pointed out, *humus*, or the mould of the upper soil, is rich by virtue of the incalculable number of micro-organisms constantly feeding upon it; and from such decompositions, when not turned to good uses by the growth of vegetation, is developed what is the universal attendant of damp soils—malaria.

Victor Horsley, B.S., M.B. (University Coll., London), thus speaks in this connection:

"The forms most commonly found are micrococci and bacilli, and, as might be expected, the superficial layers contain the greatest number; while, further, the bacilli are found, especially when the soil is saturated with decomposing animal and vegetable fluids (manures, etc.), the organisms decrease in frequency with the depth investigated, until at about one metre the undisturbed earth is apparently free from them. In connection with the existence of organisms in the earth, it must be remembered that (1) probably the lowest winter temperature has not the slightest influence on their actual vitality, and that (2) the penetration of the soil by them will differ according to the possibility of carriage by the seakage of water. While some of the zymotic diseases are possibly saprotic in origin, and are undoubtedly connected with obscure changes in the soil, which may be termed healthy, evidently requires thorough investigation, and would afford a firm foundation for the subsequent research into the etiology of cholera and malaria."

The preceding paragraphs have been devoted to the illustration of two apparently universal laws:—

1st. That decomposition, dependent upon the presence of organic accumulations, seems invariably favourable to the development of zymotic diseases both in men and animals.

2nd. That these diseases are prevalent and severe in proportion to the amount of such accumulations, associated with the concurrent fact that where these unsanitary conditions most abound isolation of disease where existent is invariably most imperfectly carried out.

From these two conclusions it readily appears that from the sanitary standpoint, we have two plain and distinct tasks before us, the first being, how best to prevent the accumulations and decompositions of organic, especially animal matters, and second, how to prevent the serious effects incidental to the presence of disease in animals, on which we are dependent for our milk and food supplies. In the several reports (*vide* report on Cheese Factories, and the report on the Toronto Cattle Market), found in the Appendices, we have both of these matters to some extent dealt with. The details of the measures necessary to be adopted, are varied both in character and the facility with which they can be carried out. They may, however, be said to be included, as far as their execution goes, under two heads—(1) individual, (2) municipal.

Discussing individual measures it will be seen that the prime necessity is to have people everywhere appreciate the first well proved fact, that the presence of filth means putrefaction, and putrefaction sooner or later means disease. With this must be taught the associated fact that the proper disposition of so-called organic filth, has a direct economic value. Thus if the farm yard be cleansed of its manure twice yearly, and it added to this the farm yard surface be graded and paved, so that its fluids are drained to a cistern, several economic results are obtained, (*a*) the manureal value maintained to an extent of fifty per cent. or more beyond the ordinary; (*b*) the pollution of the soil sur-

rounding the well from which stock are supplied will be in a large measure prevented. The importance of the result cannot be over estimated and up to the present is scarcely comprehended at all, much less fully appreciated by the ordinary farmer. In a number of the instances already quoted, going to show that immunity from disease, under unsanitary conditions cannot long exist, we cannot fail to appreciate the fact that bad water and bad air must affect the health of animals, to the extent not only of creating disease in them, but of producing illness in persons using milk and flesh. Prof. Robertson, Director of the Creamery at the Agricultural College, has stated to me that the appearance of certain milk, occasionally received from the farmers, was such as to lead to a very strong suspicion of its being unwholesome, and of having come from a diseased cow. Unfortunately the power of contamination residing in the milk of one such animal is almost unlimited, and cannot fail to be productive of such intense poisons as the *ptomaine tyrotoxicon* found to be developed in cheese. *Vide* report by Prof. Vaughan, Ann Arbor, Mich.

That such milk may likewise be a carrier of disease, has been already illustrated in the case of scarlatina, and many similar examples have been given in the case of diphtheria. The dangers are still more evident if we hold to the belief of Naëgeli, that any of the forms of bacterial organisms may under certain conditions become pathogenic, or may manifest itself "as the agent of acidification of milk, of putrefaction, and as the agent producing several maladies."

The duty and advantages of not having a farm-yard well contaminated are thus made most evident. But the evils may result in other ways; observing dairymen have found in occasional instances that the milk of cows drinking water contaminated with decomposing whey allowed to run into a creek, has injuriously affected that supplied to cheese factories: while I have heard the same thing stated regarding the organic refuse from a woollen mill poured into a creek. Refuse whey may, however, be injurious in two other ways, one by its being allowed to contaminate the water supply used in a creamery or dairy, and the other by its putrefaction in vats, etc., near the building, creating effluvia which, borne on the atmosphere, contaminate the air of the creamery itself.

Allied evils do not infrequently grow out of the reprehensible habit of feeding large numbers of pigs within no long distance from cheese and butter factories. Water from impure sources, whether farm-yard or house-well, as also from polluted streams, used in rinsing the cans, may similarly produce evil results. Effects, of an allied nature in their results, are associated with the drinking water of houses, when contaminated either by surface soil-soakage in the back-yards, and by that from privies, or that of public water, when the sewage of one town is allowed either to pollute its own water supply or that of a neighboring town, as shown in the cases *re* cholera cited, in the introduction to this report.

Organic accumulations in cellars, and associated fungoid growths from the decay of wooden foundations, also the collections of garbage in dust-bins, back-yards, dumping grounds, etc., while altering the method of reception by the system, are similarly examples of putrefaction, which along with that of vegetable decomposition in damp soils, must be limited or prevented, if diphtheria, typhoid, malaria, and other forms of septicæmia are not to continue to prevail. Dr. Meredith Clymer has shown from actual statistics regarding the epidemic of cerebro-spinal fever, as it existed in New York 1872, "that when the disease occurred away from the marshy districts, the elected haunts were densely populated tenement dwellings, in which the house drainage was invariably in bad condition. . . . Wherever we have examined the local conditions, it has been found that the drainage of the premises has been faulty, or that the immediate surroundings have presented such conditions as must necessarily give rise to some form of disease—cellars containing decomposed or decomposing vegetables, garbage, or other filth, in a putrefactive condition, and privy vaults located beneath sleeping-rooms, windows in *cul-de-sacs*, where there were no free currents of air. The most usual defects discovered were connected with house drainage."

Refuse "destructors" are thus seen to be not only a remedy, but a necessity in order to remove the dangers from this form of organic filth. Several cheap and satisfactory forms are now constructed, and our municipal authorities may fairly take up the matter.

We have thus naturally come to the municipal work necessary in this connection. Rural Boards have a special work in causing creameries and dairies to be licensed and carried on under strict supervision, and ought further to maintain some oversight in the instance of dairy farms. But the chief work must lie with civic Boards. Their labours, from what has been already stated, must cover several fields, as the licensing of vendors and the inspection of milk supplies, not alone in the town, but at the farms where obtained. The town shops and houses of the vendors must also be closely scrutinized. The matter of meat inspection is not less important, as, in extended quotations, has already been pointed out. Abattoirs near cattle-markets, and an individual inspection of animals before and after slaughtering, as well as a strict oversight of butcher-stalls, and butchers' houses are a *sine-qua-non* to safety in this direction. "Cremators," or garbage destructors are necessary and component parts of any system of inspection, which is going to thoroughly carry out the idea of preventing organic accumulations.

Concluding this paragraph, I quote from Dr. Ballard's "General Report of the results of the Sanitary Survey made in anticipation of Cholera, 1885-1886, by the Local Government Board," the various matters inquired into; and would further say that these, in addition to several others already referred to by me, must be made the special work of local sanitation, if filth-diseases are to cease to dominate:

(1) General cleanliness; (2) Drainage; (3) Excrement conservancy and disposal; (4) Removal of solid refuse, vegetable or animal refuse and domestic dust or ashes; (5) Water supply; (6) Condition of dwellings of the poor and labouring classes, overcrowding upon area and overcrowding in dwellings; (7) Sanitary administration; (8) Medical officers of health; (9) Work of the inspectors of nuisances; (10) Hospital provision.

III.—Review of Public Health Work in Ontario for the Semi-decade 1882-1886.

Report on Sanitary Organizations in Ontario prior to formation of Provincial Board in 1882; on the work done under the Act of 1882 prior to the Act of 1884, making the organization of Local Boards compulsory; and on the progress under the Act of 1884; and amendments thereto, viz., the Acts 1885-1886.—Retrospects are not always, and need not invariably be, pleasant, but from the fact that memories of what is pleasant tend to linger, it gives me pleasure to recall to your remembrance, by a rapid review of the Board's work during the five years of its existence, some of the important tasks undertaken and labours performed, so that through this report the public generally may be able to gain a comprehensive idea of what is embraced under the Department of Public Health, and of what the Government has in its legislative capacity been endeavouring to perform in their behalf.

The municipal councils of cities, towns, villages and townships throughout the Province before the year 1882, had the power, under Chapter 190, Revised Statutes of Ontario, to appoint Health Officers to look after the health interests of their respective municipalities. This system, however, was not of such a nature as to cause any marked improvement in health matters; on the contrary, it had been shown that many municipalities neglected to look after the sanitary requirements of the people, and that scarcely any steps were taken to have householders become educated in a matter of such vital importance to their well being and that of the community at large. The result of this was that the people did not know what precautionary remedies to adopt in order to ward off an epidemic of disease, nor, in the event of an epidemic arising suddenly in their midst, what course to pursue in order to check its progress. Many people then wondered why such diseases as Typhoid Fever, Diphtheria and Scarlet Fever, should break out, perhaps in a family whose house was a model of cleanliness, compared with many others in its vicinity. Further than this, when the disease did break out, few thought of or knew the necessity for isolating the patient, nor was there any proper knowledge of the necessity for or the use of disinfectants, communication between the infected family and the neighbours was the rule rather than the exception, and examination into the local sanitary conditions of infected dwellings, if made at all, was made without any distinct idea of what evils there were to be remedied

As an illustration of how imperfectly municipal health work was understood or performed at that period, it may be mentioned that during the years 1872, 1873, 1874, Smallpox appeared in every county in Ontario, causing 371 deaths, while in 1883, 1884, 1885, it appeared in only fourteen counties, causing 84 deaths. Such, then, were the conditions prior to 1882, when, after considerable discussion, "An Act to establish a Provincial Board of Health and to give increased powers to Local Boards of Health" was passed by the Legislature. Its objects as set forth in clause 3 were :—

"The Provincial Board of Health shall take cognizance of the interests of health and life among the people of the Province. They shall especially study the vital statistics of the Province, and shall endeavour to make an intelligent and profitable use of the collected records of deaths and of sickness among the people ; they shall make sanitary investigations and inquiries respecting causes of disease, and especially of epidemics ; the causes of mortality and the effects of localities, employments, conditions, habits, and other circumstances, upon the health of the people ; they shall make such suggestions as to the prevention and introduction of contagious and infectious diseases as they shall deem most effective and proper, and as will prevent and limit, as far as possible, the rise and spread of disease, and they shall, when required or when they deem it best, advise officers of the Government and Local Boards of Health in regard to the public health and as to the means to be adopted to secure the same, and as to location, drainage, water supply, disposal of excreta, heating and ventilation of any public institution or building."

Amongst the first Acts of the Provincial Board of Health, which held its first meeting in May, 1882, was the issue of a circular to the clerk of every municipality in the Province, asking them to inform the Board whether their respective Municipal Councils had complied with the powers conferred upon them by Cap. 174, Section 466 and subsequent sections of the Revised Statutes of Ontario, giving them power to enact by-laws for the preservation of the public health, the prevention of contagious diseases, etc. ; and accompanying this was a letter to physicians, asking them to use their influence in urging municipal authorities to take action in matters relating to the public health. Further, a very large amount of sanitary information in pamphlet form was prepared by the Board and issued in all directions throughout the Province. Medical men were asked to report to the Board monthly the diseases occuring in their practice—to which request a liberal response was given. A map of the Province was made and divided into ten health districts, on which all the diseases as reported by the physicians were entered for the information of the public. When thus completed it was printed weekly under the title of the *Health Bulletin* and distributed to municipal councils, newspapers, physicians and sanitarians in Ontario, as well as to sanitary exchanges in the States of the Union. Many visits to various municipalities were made by the Secretary and other members of the Board during the year, for the purpose of investigating unsanitary conditions complained of and of impressing on the minds of local health authorities the necessity of carrying out the laws already laid down for their guidance, as well as the suggestions of the Provincial Board, in order that a correct system of health work might be inaugurated. In addition to Commissioners appointed to collect sanitary information in Great Britain and in several of the United States where State Boards of Health were in active operation, a Sanitary Convention was held in St. Thomas, under the auspices of the Board, at which papers on various important subjects were read. Investigations were made into the causes of outbreaks of Typhoid Fever at Sarnia, Stratford and Lambton Mills, of endemics of Malaria at Madoc and Coboconk, as also a report on the sewerage system and water supply of Toronto. Pamphlets were also prepared by the Board on "How to Check the Spread of Contagious or Infectious Diseases," and on "Directions for the Resuscitation of the Apparently Drowned." Such was the principal work done by the Board in 1882. During the winter of 1882-1883 lectures on various sanitary subjects were delivered by members of the Board in a number of places, under the auspices of Mechanics' Institutes, School Boards, Literary Associations, etc.

In 1883 the work of the Board expanded in every direction, as will be found by consulting the report for this year. Some of the more important work done was the following :—

Compilation and Study of Weekly Reports of Diseases in Ontario.

Reports on outbreaks of Smallpox at Port Arthur and along the C. P. R., at Peterborough and Claremont; of Measles at Dundas and Hamilton; of Typhoid at Niagara Falls and the Belleville Institute; of Diphtheria at Dickinson's Landing, Easton's Corners, etc., and report on Malaria in the Grand River District, and on the London West floods.

Copy of circular to Clerks of Municipalities and Medical Correspondents of the Board and answers thereto; report of the Committee on Adulteration of Foods; report of the Committee on Epidemics & Summer Resorts for Children, and Model Dairies in Brussels; report on the Disposal of Sewage, Toronto Island; report of delegates to the American Public Health Association.

By-laws suggested for the guidance of Local Boards of Health; pamphlet entitled "Directions for Preventing the Spread of Asiatic Cholera;" pamphlet on the "Disposal of Sewage."

Reports regarding Doncaster, Leslieville and Richmond Hill fat-rendering establishments; on Toronto Cattle Byres; on the Smoke Nuisance.

Report of Special Committee regarding a Text Book on Hygiene for Schools; of a Committee on School Hygiene; on School Visitation and Medical Inspection of Schools, Asylums, etc., in France.

An important Sanitary Convention was also held in London during this year and lectures were delivered by members of the Board in various parts of the Province. From this record it is evident that the Board was equally enthusiastic, both in its work of propagandism and practical sanitation. After two years' experience, however, it was felt that better local organization was imperative if executive work was to be effectively carried out. Through all the efforts put forth, the Board had positive information regarding the existence of only fifty Local Boards in forty counties; of twelve counties with no Boards; of ten Boards with sanitary inspectors (one salaried); of four medical health officers; of three Boards with medical members, and one Board with three salaried members. Toward this end the Board therefore directed its energies, and for three months during the winter of 1883-1884, committees of the Board spent a very large amount of time and labour in preparing a comprehensive Health Act, based upon the primary condition of Local Boards of Health being compulsory, to be appointed by the Council in every Municipality in the Province.

The Public Health Act of 1884, which is the outcome of this work, makes it incumbent on all Municipal Councils to form Local Boards of Health each year immediately after the Councils themselves are elected, and to possess all the powers hitherto vested in the Councils regarding matters appertaining to the public health. Copies of the Act were mailed to the Clerks of all the Municipalities, (who were thereafter, in accordance with section 17 of said Act, to be the secretaries of the said Local Boards) together with a circular, asking them to call the attention of their respective Councils to the provisions of the Act and in conformity with it to have Local Boards appointed without delay, and notify the Secretary of this Board of such appointment being made, giving the names of the members who were elected chairmen, and their residence. While it is true that quite a large number of municipalities, especially in rural districts, did not act in the matter during the year, owing (as the enormous amount of correspondence with them, answering queries of how to proceed, explaining away various clauses of the Act, etc., etc., will show) to their not thoroughly understanding the meaning of some of the clauses, yet there is abundant evidence to demonstrate that a large amount of interest was taken in public health work, as shown by the following results. Of Local Boards of Health established in 1884 there were

In the 447 townships in the Province, there were 184 Local Boards formed, twenty-five of them having Medical Health Officers and nineteen of them Sanitary Inspectors, while seventeen had appointed both Medical Health Officers and Sanitary Inspectors. In the 203 cities, towns and villages in Ontario, there were 180 Local Boards established, and of this large proportional number 63 had Medical Health Officers, 92 had Sanitary Inspectors, and 14 had both Medical Health Officers and Sanitary Inspectors.

To add to this grand showing it must be borne in mind that it was all accomplished between the 1st July and 1st November, 1884, or in the small space of four months after the passage of the Act. Every care was taken in this year to continue the work of disseminating sanitary literature, in order that local health authorities might be put in possession of such information as would tend to promote the interests of their district and enable them to more clearly understand the work which they were appointed to perform.

In order to give a correct idea of the nature and magnitude of the work performed by the Board in relation to the investigation of unsanitary conditions and the outbreaks of disease in different parts of the Province, we cannot do better than give the following as a summarized list of what was done :—

Teeswater—Investigation of a nuisance caused by a jam in a stream ; *Point Edward*—Investigation into outbreak of Smallpox ; *Almonte*—Investigation by the Secretary into an outbreak of Typhoid Fever ; *Smith's Falls*—Investigation by the Secretary *re* an epidemic of Diphtheria; *London West*—Investigation *re* a mill-dam nuisance ; *London East*—Carling's Creek nuisance; *East Zorra Township*—Investigation into an outbreak of Smallpox ; *Woodstock*—Disposal of sewage difficulty ; *Haliburton*, *Peterboro'*, *etc.*—Investigation into saw-dust nuisances; *Flos Township*—A case of Smallpox , *Penetanguishene*—Nuisances investigated and removed ; *Cornwall*—The Board's sanction asked *re* the building of a slaughter-house ; *Carden Township*—Investigation into a case of Smallpox ; *Woodville*—Investigation into outbreak of Typhoid Fever ; *Galt*—Mill Creek nuisance investigation ; *Waterloo Township*—Polluted creek nuisance investigated ; *Bridgeport*—Nuisance investigated ; *Hamilton*—Correspondence *re* disposal of excreta ; *Toronto*—Ashbridge's Bay investigation.

Besides the above a large number of sanitary matters of minor importance received the special attention of the Secretary of the Board, and when we say that nearly one thousand letters and six hundred postal cards were written to Municipal Clerks, Medical Health Officers and other sanitary authorities, the public will have sufficient proof of the interest manifested in public health work, not only by the Provincial Board of Health, but by Local Boards throughout the Province.

We must now refer shortly to the outbreak of Smallpox in Hungerford Township, Hastings County. In the month of November a disease broke out in this township which was thought to be that of Smallpox. The Secretary of the Board was telegraphed for to come and investigate the matter. He arrived there on the 19th of the month, the day after the receipt of the telegram, and ascertained that Smallpox was prevailing to an alarming extent. Owing to the wide prevalence of the disease, the Secretary was directed by the Board and authorized by the Minister to take whatever measures were necessary in aiding the local authorities to stamp out the disease. In a few days a system of inspection had been instituted, with two medical men, appointed by the Board, to co-operate with the Local Board of Health, for the purpose of confining the disease. Owing, however, to the panic, these duties were of the most fatiguing kind, but by the indomitable perseverance of the assistants, success eventually crowned the efforts of the Secretary and staff. It is unnecessary to here particularize each item of the precautionary measures adopted—the medicines and vaccine virus sent into the townships and the large number of the people that were vaccinated. There can be little doubt but that, had this Board not been in existence to deal with this outbreak, and had the old system of Municipal Committees still existed without any central authority to aid and direct, the disease would have become general throughout the Province.

In consequence of the experience gained by the Hungerford outbreak of the necessity for further legislation in regard to epidemics, "An Act to make further provision regarding the Public Health" was passed by the Legislature during the session of 1885, dealing with the appointment of Medical Health Officers, their powers and duties, with removal of nuisances, etc., etc. This Act was distributed to all the Secretaries of Local Boards in Ontario and to the Clerks of Councils not as yet having complied with the law in forming Local Boards. There are large powers conferred upon Local Health authorities, which will have the effect of making them understand better than hitherto the health laws, and the way in which their enforcement will be effectual and best calculated to promote

the interests of health under their jurisdiction. Throughout the greater part of the year, the Provincial Board was engaged in superintending the work of the large number of Local Boards which had been formed during the past two years, carrying on extensive correspondence with their members and Medical Health Officers, and investigations into the causes of and suggestions of methods of procedure for averting the progress of epidemic diseases. Sanitary information was this year, as in the preceding three years, largely circulated throughout the Province, and the disease reports received from local medical practitioners were carefully tabulated and utilized in the Report for the year. During the year there were 570 Local Boards established, 298 medical health officers and 200 sanitary inspectors appointed, which shews a large increase over 1884. The reports from Local Boards at the end of the year shewed clearly the extended and gratifying progress made in public health work over other years.

What the Board was called upon to do in relation to unsanitary conditions or nuisances was similar in character to its work of the preceding year. Some complaints about cheese factories were made to the Secretary, which were referred to the local authorities to be dealt with, and from the action which the Board has taken in reference to this matter, it is confidently expected that sanitary laws relating to these factories will receive greater attention in future.

The slaughter house nuisance is yearly receiving increased attention from Local Boards of Health, and the law respecting them contained in the Act of 1884, is becoming more appreciated by the general public, who are anxious to have it enforced, thus lessening what in former years have been serious nuisances and menaces to the public health.

The complaints of the manner in which fat rendering establishments and knackeriesare being conducted as detrimental to the health of those working in them and those residing in their vicinity, have been numerous and received the attention of the Board. The law in regard to this class of nuisances—vide Sec. 37, Public Health Act, 1884—is rather cumbrous and expensive and should be amended.

Epidemics of different diseases were not so numerous as in 1884, although diphtheria and typhoid fever made their appearance in several parts of the Province, to a somewhat alarming extent. In the early part of the year a few cases of smallpox occurred in several of the townships contiguous to those of Hungerford and Elzevir, (the principal battle ground of the outbreak of 1884,) having their origin in cases of this disease continuing from that year. These cases were not allowed to spread to any alarming extent, the local authorities having acted promptly on advice tendered them by the Secretary of the Board. On the 16th of May a circular was issued to the various municipalties in Ontario, calling upon them to put in force the powers contained in Cap. 191, R. S. O., respecting vaccination, and in over one hundred different places a general system of vaccination was inaugurated and carried out. This was highly satisfactory and timely, in view of the fact that smallpox had then spread in some degree in Montreal, and had likewise the effect of promoting a feeling of comparative security in our people when they subsequently became aware of the great danger that threatened that city and this and other Provinces.

By July the Montreal outbreak had assumed serious proportions, but in the meantime the Board had been busy devising means by which our Province could be best protected against the disease should it invade the Province. After the conference arranged for by various interests had been held in Montreal, in the end of August, and at which this Board was represented by the Chairman, the outlook appeared so serious that the Government, acceding to the request of the Board, passed by Order in Council the Smallpox Regulations, dated Sept. 5th, 1885.

This scheme, in brief, included in the Regulations, consisted of the appointment of an efficient staff of medical inspectors, the chief of the staff residing in Montreal. The other members of the staff were detailed to board trains and boats bound for any part of Ontario, and had instructions to inspect passengers and freight, to see if the former showed any symptoms of Smallpox or required vaccinating, and if the latter required disinfection. They also had instructions to arrest, on entering Ontario territory, any person who declined to be vaccinated and who failed to show marks of the operation having been recently and successfully performed. It is needless in this article

to recapitulate every effort that in the end turned out so successful in preventing, with but comparatively few exceptions, the importation of the contagion of this fatal disease. The whole result may be summed up by simply stating that in this Province, up to the end of December, 1885, there were only 146 cases of Smallpox, growing out of forty-two cases of imported disease, (seventeen of which were prior to inspection, and twenty-five after,) and only sixteen deaths ; while in Montreal city alone, up to and including the same period of time, there were 3,175 deaths from the disease. When we consider that out of the 110,000 passengers leaving Montreal in the months of September, October, November and December, and the large amount of luggage and merchandise accompanying them, there were imported only sixteen cases of the disease from infection of the person, only two from the luggage or clothing, and only one from merchandise, it will at once be apparent that the efforts put forth by the Provincial Board of Health to save the Province, were eminently successful and far exceeded the most favourable anticipation of the Board.

Regarding public health work in 1886, but little needs to be added to what has been written in previous pages of this report in addition to the accompanying appendices. As stated in the Introduction, the year has shown a steady progress in internal organization of the Province. As 610 municipalities reported Local Boards during this year, it may be said, that nominally, at any rate, every municipality has its health organization, and as happened in several instances, where a case of Smallpox has occurred, they have been proven to be prompt and efficient in dealing with the outbreak of this disease. Routine health work in the field of nuisances has steadily progressed in incorporated municipalities, and many rural municipalities are earnestly engaging in sanitary work. The Meeting of the American Public Health Association, while promotive of health work in Ontario, is one of the best evidences, not only of interest evinced by the Government and of the Board, in inviting the Association to Canada, but also of the influence which the Canadian factor in American continental health work has in this International Association. Growing out of this meeting has been formed an Association of Executive Health Officers for Ontario, which there can be no doubt, is destined—if its counsels are wise, and its councillors true to their self-imposed task—to exert an important influence upon future Provincial, but especially municipal health work and legislation.

To sum up, in conclusion, I think it must be granted that, as shown in this *resumè*, Ontario is to be congratulated in this, as in many other of the steps in social progress, which she has taken in advance of the other Provinces of the Confederation, and in the progress which she has made, as compared with any other state organization on the continent during the period since her Provincial Board has been in existence. As expressed by a prominent member of the House in 1882, when the Board was instituted, the organization was tentative, and its existence and success will depend upon the energy which is shown by the Board and its officers. Five years have shown that energy and enthusiasm can make an experiment a success, a potentiality a finality, a then localized organization of six, a homogeneous health organization, co-extensive with the limits of this Province, and embracing as active workers, at any moment that an epidemic may appear, an army of over 3,000 men, exclusive of some 500 regularly commissioned officers. During the four sessions since its organization, three Health Acts have been placed on the Statute book, and an amendment to the law relating to vaccination, all directly tending to make the relations between the central and local authorities more intimate. The relative limits of their respective works have become better defined, defects in municipal laws as regards nuisances, in some measure remedied, powers, as relating to the management of epidemics enlarged, and the range of matters included within the province of health work more extended. While the life of the individual has in certain directions become more protected than formerly, no limitation of any legitimate well-conducted industry has occurred : but, on the contrary, it has been possible to show, and in some measure teach the public to understand, that every industry becomes commercially more successful, to the extent that it is scientifically conducted, with due regard to the health of the operatives, the cleanliness of materials, and the more complete utilization of its by-products.

Suffice it to say that private opinion, public sentiment, and legislative enactments, have all developed so strongly in favour of health boards, central and local, that matters at first thought beyond the bounds of health laws, have been brought within their

ordinary limits, that ends thought impossible of accomplishment, have now became practicable, and hopes timidly expressed have been more than realized. If the country is satisfied with the experiment—and it is, as must be judged by representative statements in Parliament—then it would seem only proper and becoming that we, to whom such hearty sympathy and support have been accorded, in the conduct of matters hardly ever agreeable, and often extremely unpleasant, pursue with careful diligence the work laid upon us, and endeavour to perfect and fix on yet firmer foundations this guage of a people's happiness—the measure of the public health. Let us take as our motto—

"Count nothing done while aught remains to do." (*"Nil actum reputans dum quid superesset agendum."*)

IV.—Diphtheria in its Sanitary Relations.

The History, Immediate Cause, Exciting Causes, and Limitation of Diphtheria.

Under ordinary circumstances the remarks already made in Section I., which includes the history of the Board's work during the year in relation to epidemic diseases, would have been deemed sufficient in regard to this as to the other contagious diseases: but the unfortunate prevalence of Diphtheria during the whole past year to an extent unprecedented and, indeed, unequalled in the history of the Province, would seem not only sufficient excuse for devoting some more extended remarks to it, but would also appear a special reason impelling such, with the hope that individuals, the public generally, Boards of Health, Local and Provincial, as well as our Legislature, may be led to consider the means which seems most likely to aid in limiting the spread, lessening the fatality, and diminishing the enormous financial loss which, in the aggregate, is involved in dealing with this much dreaded disease.

1. *History of the Disease.*

(a) *Medical History of the Disease.*—Allowing for the limited knowledge and crude expressions regarding disease in general in past ages, historical evidence leads to the conclusion that Diphtheria has existed since very early times—as, indeed, its supposed cause at all times connects it with aggregations of people in more or less limited spaces. As "Syriac ulcer," Aretaeus of Cappadocia describes a disease commonly supposed to have been Diphtheria. Little accurate was said about it by any of the writers in the Middle Ages: but since 1500 A.D. evident reference to it has been made by writers of Holland, France, Germany, Spain and Italy. After 1600 A.D. references are made to it by English, Swedish, Dutch and American writers.

It thus appears that in climates as far south as Eastern India and Greece, since early writers of both were the first to describe it, and as far to the north as England and Sweden, this disease has been known and epidemics of Diphtheria have occurred.

Its modern history may, however, be said to have begun when Bretonneau, in 1821, asserted the identity of Angina Maligna (Diphtheria) with Membranous Croup. He referred to the continuity of exudation, or false membrane of the nose, pharynx and respiratory tract and asserted that it was a specific disease and not to be confounded with catarrhal or scarlatinal inflammation. He considered it in large measure a local disease. Since his time more and more has yearly been written on the subject. English authorities, up to recent years, disputing the identity between the pharyngeal and laryngeal diseases. Almost all recent pathologists are, however, agreed as to the identity of the pathological processes in the two forms of the disease.

(b) *History from Statistics and Death Returns.*—In so far as the disease can be studied in this way, especially in connection with death returns of countries, districts, towns, cities, etc., and *especially* in relation to climate, season, etc., it will be evident that for sanitary purposes such an investigation would be of the greatest value. As Hirsch has expressed it, regarding the goal of all historico-pathological and geographico-pathological enquiry:—"The full aim and object of such enquiry is to exhibit the particular circumstances under which diseases have occurred within the several periods of time and at

various parts of the globe ; to show whether they have been subject to any differences and of what kind, according to the time and the place ; what causal relations exist between the factors of disease acting at particular times and in particular places on the one hand, and the character of the diseases that have actually occurred on the other ; and finally, to show how those diseases are related to one another in their prevalence through time and space."

Unfortunately, as regards Diphtheria, the opportunities for such historical studies have been extremely limited up to the most recent times. This has doubtless been in large degree due, not more to the imperfect character of past records than to the opposing views regarding the real nature of the disease.

Within the last ten years, however, with the increase of established systems of registration in various countries, and with the more accurate knowledge and diagnosis of the disease, such data have gradually been accumulating as enable us to gain some tolerably complete idea of the position which Diphtheria holds amongst the causes of mortality, and of the enormous importance which an increase or decrease of its prevalence must have upon the health and prosperity of any community. For the purpose of illustrating its prevalence I have, with some searching, been able to present the following extended statistics which, though manifestly imperfect, yet contain much valuable information :—

TABLE showing the Prevalence of Diphtheria per 1,000 of Population for different years.

LOCALITY.	YEAR.	POPULATION.	TOTAL DEATHS.	RATE PER 1,000.
England and Wales [D. & C.]	1884	27,132,449	10,768	.39
Principal Towns in 11 English Districts.. [D. & C.]	1884	12,968,352	5,248	.40
London [D. & C.]	1884	4,019,361	2,037	.49
Glasgow [D. & C.]	1880-1885	534,334 (mean)	292 (mean)	.54
Fifty Cities in United States—situated in 21 Grand Groups [D. & C.]	Census year ending June 1, '80.	7,790,859	9,330	1.19
Nine American States—(15 years' returns)[D.]	For Total of 15 years	14,110,365	16,072	.71
American Cities :				
Baltimore [D. & C.]	1885	417,220	400	.95
	1886		190	.45
St. Louis [D.]	1885	400,000	372	.93
	1886		719	1.79
Chicago [D. & C.]	1885	630,000	1,012	1.60
	1886	700,000	1,273	1.64
New York [D.]	1885	1,397,395	1,325	.94
	1886	1,439,037	1,727	1.20
Brooklyn [D. & C.]	1885	664,602	832	1.25
	1871-1881		average.	1.81
Ontario [D.]	1881-1885	1,923,610 (census 1881)	4,793	.50
Ontario (based on return of first half-year)	1886		1,470	.76
Ten Cities of Ontario (Registrar-General's Returns) [D.]	1881-1885		789	.50
Ten Cities of Ontario [D.]	1886		342	.75

In the above Table those returns in which Croup is included with Diphtheria have D.1& C. in brackets.

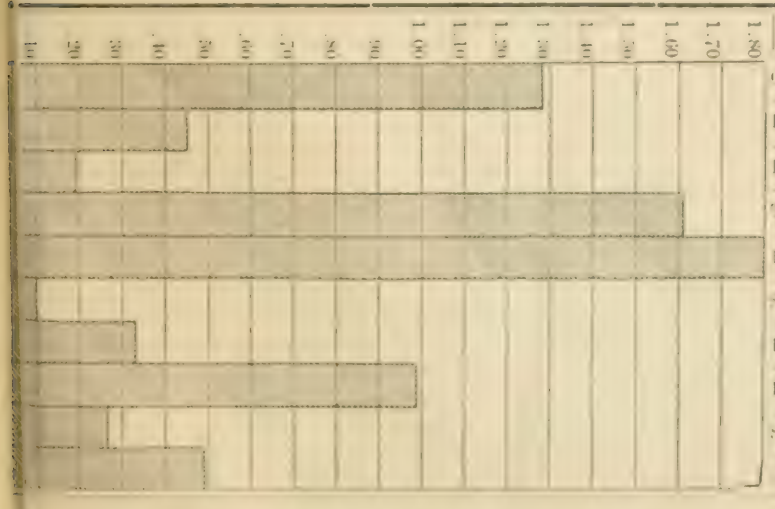
DIAGRAM I.

Showing Prevalence of Diphtheria in 1884 in Eleven Grand Districts in England, giving the aver
death-rate of the aggregate totals for 1,000 of the population.

Scale showing death-rate per 1,000.	
I.	London City.
II.	South-Eastern.
III.	South Midland.
IV.	Eastern.
V.	South-Western.
VI.	West Midland.
VII.	North Midland.
VIII.	North Western.
IX.	Yorkshire.
X.	Northern.
XI.	Monmouthshire and Wales.

DIAGRAM II.

Showing Prevalence of Diphtheria in 1886 in Ten Cities in Ontario, giving the death-rate for ev
1,000 of the Population, and the Height above Sea-level.

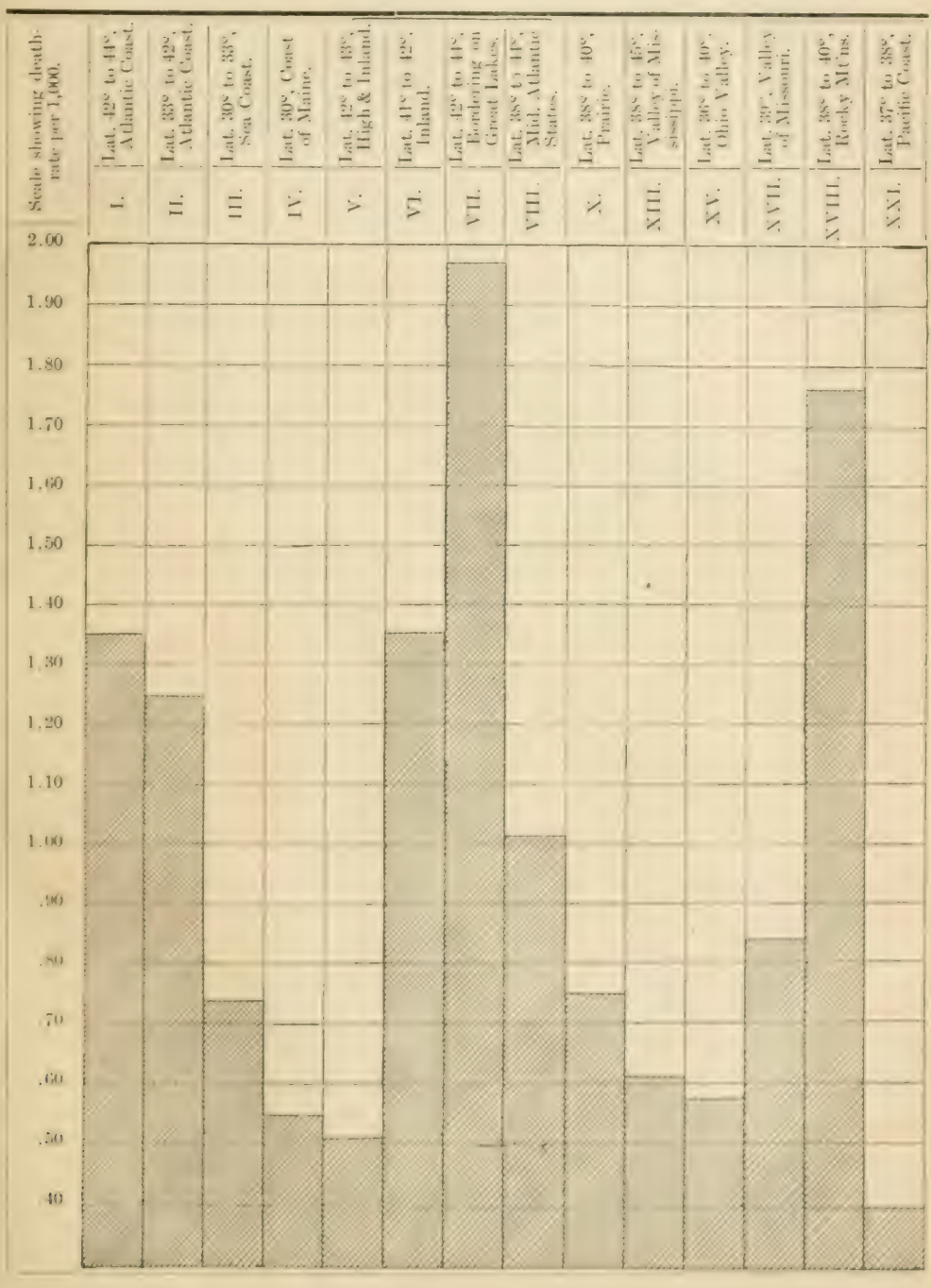


Scale showing death-rate per 1,000.	
Ottawa	Inland, 240 feet.
Kingston	North of Lake, 307 feet.
Belleville	On Lake, 270 feet.
Toronto	On Lake Ontario, 300 feet.
Hamilton	On N. E. Slope of Mountain, 740 fe
St. Catharines	Between Lakes Ontari and Erie, 585 feet
Brantford	Inland, 668 feet.
London	Inland, 816 feet.
St. Thomas	Inland, 787 feet.
Guelph	Inland, 1,100 feet.

DIAGRAM III.

Showing Prevalence of Diphtheria in Cities in certain Twenty-one Geographical Groups in United States, giving the death rate for every 1,000 of the population.

(*Taken from Census of 1880.*) NOTE.—*Groups IX., XI., XII., XIV., XVI., XIX., XX. contain none of these cities.*



From this summary of the extended tables which follow, we gather a few points which are perfectly apparent. The first of these is the fact that comparatively Diphtheria is much more prevalent in American than in English cities. Why this is does not appear very clear; but for the present it is sufficient that we note the fact. It further appears that, taken as a whole, the two largest English cities have a greater average prevalence than the average for all England. But, should we assume to associate this with the fact of over-crowding, we would find, from a close examination of Table III., that there are other English districts and smaller towns in which the disease has more than the average of prevalence. Similarly we notice that several of the largest American cities have a much higher degree of prevalence than that given as common to the fifty cities in the different groups, and very much higher than the average as given for the total of nine states. This much I think may fairly be stated as a general fact, even though a liberal allowance is made for imperfect state registration. Another fact which seems proved is that aggregations of people do not increase the mortality from Diphtheria, since in Ontario, taking the Registrar General's statistics for the years 1881-1885, the total deaths for the ten cities present exactly the same average as for the whole Province. The same fact would seem to be proved from the returns for 1886, as far as can be calculated, were it not that the population adopted in the Provincial returns is that of the Census of 1881, while that of the ten cities is presumed to be taken from the last municipal assessment. Allowing for equally incomplete registration, it is further apparent that the nine states show a total average prevalence much the same as that for Ontario. From the tables of returns of several of the largest American cities in most recent years, I think we may conclude that where registration is practically perfect as in them, we have the correct gauge of the prevalence of the disease on this continent in centres of population; since taking the individual returns of the ten cities of Ontario for 1886, where returns are similarly complete, we find that Ottawa, Toronto and Hamilton have an almost equal death rate. From monthly returns, from time to time received from other American cities, as St. Paul, Milwaukee, Detroit, Cleveland, Rochester, etc., a rate practically the same as the foregoing may be calculated. While, as will be seen further on, there might be some reason to suppose that north temperate climates in America have the disease in greater prevalence than more southerly latitudes, still, judging from the returns from Baltimore and St. Louis, the disease cannot be said to vary greatly in them from the prevalence in New York and Brooklyn. Further, we may fairly say that sea board cities are not scourged to an extent greater than cities inland, as Chicago, Milwaukee, St. Paul or St. Louis.

Regarding the District prevalence of Diphtheria in England, as shown in the above Diagram 4. (Table I. Appendix), I cannot do better than quote from the Registrar General's report:—

"There are manifestly some counties that are much more liable to Diphtheria than others, and, if the counties with high rates be distinguished by shading an outline map of the Kingdom, it will be seen that there are two tolerably definite areas in which this disease apparently finds its most suitable home. The one has its base in the south eastern counties, Sussex, Hampshire, Surrey and Kent, and stretches upwards along the eastern side of England, through Middlesex, Hertfordshire, Essex, Cambridgeshire and Bedfordshire, occasionally reaching Norfolk, Nottinghamshire and Lincolnshire, while the other area has its nucleus in North Wales and Shropshire, and tends to spread through Herefordshire and other bordering counties, as also in some years into South Wales, Monmouthshire and even across the Bristol Channel into Somersetshire. The extent to which Diphtheria spreads over these two areas differs very considerably in different years.

"In 1884 the area which was extensively invaded was what may be called the South Eastern Diphtheritic region, where a compact area, consisting of London and eleven registration counties, had rates above the general average, while in the Western or Welsh Diphtheritic region the disease was confined within comparatively limited boundaries, the only registration counties besides North Wales and Shropshire in which the rate exceeded the average for the whole country being Somersetshire and Dorsetshire. The high rate in this last mentioned county was quite an exceptional incident, and the disease

may have spread into it either from Somersetshire, where the rate had been high for three successive years, or from Hampshire, where there had been a high rate for four years in succesion; Dorsetshire forming a link that connects the Eastern and the Western Diphtheritic areas, and so being liable to infection from either."

In Diagram II. (Table II. Appendix) found above, the assumed necessary correction has been applied and the results must be assumed to be tolerably complete. It has been difficult and, indeed, is quite impossible, to separate the groups by any physical differences sufficiently marked to enable us to make safe comparisons. In a general way it may be said that cities in the more southerly groups have less Diphtheria than those further north; that the northern Atlantic cities and those on the great lakes have a greater prevalence of the disease than some of those inland; and that the Pacific coast suffers less from the disease than places in the mountains, as Denver. This seeming immunity of California is apparently due to incomplete registrations in 1880; since, the examination of monthly reports from cities shows the disease to have been prevalent in unusual degree in 1886. It is remarkable that a town such as Denver, 5,212 feet above the sea-level, a reputed health resort, should show so high a prevalence of the disease. This table, as is evident, cannot be considered very satisfactory.

Diagram III. (Table III. Appendix), manifestly very incomplete, is for Diphtheria alone, not including Croup. It is important as illustrating how much needs to be done ere we can make a satisfactory study of the conditions favoring or retarding disease. We can gather from it that while there is on the whole considerable difference between states, yet the aggregate total of deaths in 14,110,365 of a population is enormous; and further, that while in Massachusetts there has been on the whole a decided decline in prevalence in recent years, Michigan returns tend to show an increase. In the two cases there is, in all probability, an explanation beneath the surface. In the first political changes made registrations to be less carefully attended to, while in Michigan there has been a steady improvement in the registration returns.

Table IV., found in the Appendix, as already remarked, is most valuable, since it notes the present range of the disease in almost perfect systems of registration, while comparisons for the various months throughout the year, as in the case of Brooklyn, can be made. They give a satisfactory showing as far as the general tendency to a restriction of the disease goes; but they show equally—a fact which we have mentioned in our introduction to this article, viz., that 1886 has had an enormous fatality from this disease, amounting in some instances to nearly 2.00 per 1,000.

Regarding Table V., found in the Appendix, I quote from the Annual Report of the Registrar-General:—

"The deaths from Diphtheria, the principal disease in this class, have largely increased. In some counties it was quite epidemic, particularly in Essex, Leeds and Grenville (united), Wentworth, and Prescott and Russell. In the latter county the mortality from this disease was very high—134 deaths with a ratio of 3.35 per 1,000. It was also above the average, .52 per 1,000 in the following counties:—Carleton, .65 per 1,000; Hastings, .63; Simcoe, .64; Stormont, Dundas and Glengarry, .70 and York, .65. Increased returns of deaths from this cause were received from 22 out of the 39 counties of the Province."

"The discussion of the cause of this sudden increase in the deaths from Diphtheria in the Province, is not within the province of a Report on Vital Statistics, but rather within that of the Provincial Board of Health. Most assuredly, however, the startling figures demand serious consideration. Deducting the population in the cities and towns, also the deaths from Diphtheria in those places, from the totals for the whole Province, the following results appear:—The deaths from Diphtheria in the cities and towns were 289 or 4.2 per cent. of all the deaths in those places and the ratio to 1,000 living was .74. In the remaining or suburban parts of the Province the deaths from this cause were 717 or 4.7 per cent. of all the deaths, but the ratio to 1,000 living was only .46, shewing that the mortality from Diphtheria is greater in the cities than in the rural districts. Carrying

out this comparison for the last five years the results are nearly the same. Deaths from Diphtheria in the Province exclusive of the cities in the last five years numbered 4,004, or an average ratio of .47 per 1,000; for the cities, during the same period they were 789 with an average ratio of .61 per 1,000.

Mortuary Statistics of Diphtheria in the Cities of Ontario for the five years ending 31st December, 1885.

Cities.	1881.		1882.		1883.		1884.		1885.		Totals.	
	Deaths.	Rate per 1,000.	Deaths.	Rate per 1,000.	Deaths.	Rate per 1,000.	Deaths.	Rate per 1,000.	Deaths.	Rate per 1,000.	Deaths.	Average Rate per 1,000.
Toronto	44	.5	57	.6	58	.6	27	.2	86	.7	272	.5
Hamilton	9	.2	12	.3	2	.06	50	1.2	59	1.4	132	.6
Ottawa	81	3.0	60	2.1	30	1.0	7	.2	34	1.0	212	1.4
London	4	.2	3	.1	2	.1	4	.2	11	.3	24	.2
Kingston	1	.07	7	.5	0	.0	5	.3	4	.2	17	.2
Brantford	5	.5	4	.4	18	2.0	7	.6	4	.3	38	.7
St. Catharines	8	.8	3	.3	0	.0	1	.1	3	.3	15	.3
Guelph	10	1.0	9	.9	4	.4	7	.6	8	.7	38	.7
Belleville	3	.3	4	.4	0	.0	2	.2	3	.2	12	.2
St. Thomas	0	.0	5	.6	0	.0	5	.4	10	.8	20	.3
Stratford	4	.4	0	.0	2	.2	1	.1	2	.2	9	.2
Totals and average rates per 1,000.	169	.7	164	.5	116	.4	116	.4	224	.7	789	.5

Diphtheria in 1886.

Cities.	Height above sea level in feet.	Population.	Deaths.	Rate per 1,000 of population.
Ottawa	240	32,857	42	1.28
Kingston	307	15,109	7	.46
Belleville	270	10,171	2	.19
Toronto	300	111,800	181	1.61
Hamilton	740	39,085	71	1.80
St. Catharines	583	9,882	1	.10
Brantford	512	12,167	4	.33
London	816	26,254	26	.98
St. Thomas	592	11,157	3	.26
Stratford	1,185	9,000	No returns.	
Guelph	1,100	10,134	5	.49

(Note.—Meaford and Owen Sound not included with Diphtheria in these Tables.)

From this table the most that can be said is that it gives us no positive information regarding the existing causes of the disease, since until within the past two or three years the death returns were not perfect; while some of the larger cities which in 1886 had the highest death rate from Diphtheria, appear, if we except Ottawa in previous years—but slightly if at all above the average. One thing, however, abundantly apparent, is that this table, as well as most returns from American cities, show an enormous advance of the disease during 1886. For instance, taking roughly the total returns from the American cities of which statistics are given and the total for this Province, as representing deaths in a population of 8,000,000, of which Ontario forms one-fifth, and allowing for an advance in deaths from Diphtheria amounting to .25 per 1,000 of population, the total number of deaths above the average in the population is 2,000, which at the mortality rate of 30 per cent. to the number of cases of the disease, means 6,000 cases at least.

(c) Prevalence of the Disease from cases reported.—What has been said regarding the imperfect character of mortuary returns may with a few exceptions be repeated with emphasis regarding a true estimation of the prevalence of the disease from reports of cases. There are several reasons why this should be so. While in the first instance, correct reports depend upon correctness of medical diagnosis, they depend to an equally great extent upon compliance with laws regarding the notification of infectious diseases by physicians, associated with similar compliance on the part of householders. From what can be gathered it would seem that in the several American cities, returns from which are given, (*vide* Table IV, appendix) the average thoroughness of notification varies considerably—unless we assume that relatively the proportion of deaths to cases varies greatly. One principal reason for supposing that the relative difference lies in the different degrees in which notification is carried out, is in the fact illustrated by the returns from Brooklyn and New York.

Thus in 1885 Brooklyn had reported 2.02 cases per 1,000 of populations with death rate.. .78=38%
" 1885 New York " 2.09 " " .. .94=44
" 1886 " " 2.60 " " .. 1.20=46

The large number of fatal cases, to those reported in each instance, the repetition in New York, of practically the same proportion between cases and deaths in two successive years, the close proximity of the two cities, placing climate out of the question, leads one to the conclusion that the compliance with the law in Brooklyn is considerably more perfect than inNew York.

In reply to a circular issued to Medical Health Officers in Ontario, in September, 1886, some 138 answers were received. In these reports the remark is again and again repeated that the notification of cases is most imperfect. The proportion of deaths to cases given by these reporters is seen in the following table :—

Number of Reporters.	Total Cases Reported.	Total Deaths Reported.	Average Percentage of Deaths.
138	1,149	328	28½

The obvious effect of such imperfect notification is on the one hand to cause the fatality from the disease to appear appalling, and create an almost hopeless opinion on the part of the physician and public regarding any attempts at its treatment; and on the other hand to hide the actual prevalence of the disease in any community, the degree to which the economic loss from its prevalence extends, and the undeterminable debility and permanent injury to health of the survivors.

In order to attempt the determination of these two or three latter points a circular was prepared and forwarded to the physicians of Toronto. Assuming the correctness of the returns in every instance the following facts regarding the prevalence of the disease in 1886 were obtained :—

19 reporters ; 278 cases (average 16.5) ; average attendance, 7 days ; deaths, 1 in 10.

From the Toronto returns, as far as complete, it is abundantly plain that were the notification of Diphtheria thoroughly carried out, the proportion of deaths to cases would not present the same high total as in the mortality returns already quoted. This showing from physicians' returns, may be said to be due both to differences found in the type of the disease during different outbreaks, and to the varying degrees of severity of the disease at different seasons of the year. While, doubtless, it may be in some degree true that the mortality varies in different outbreaks of Diphtheria, as in other zymotics, and at different seasons of the year, I think it will be the experience of every physician that severe cases occur in every outbreak, and that, at such time as the public alarm becomes more general and cases are taken earlier to the physician, the mortality shortly thereafter declines. Speaking of the disease during the past and

other years, my personal experience has been that cases were as severe in July and August as in December.

The following table well illustrates this fact :—

Table showing Proportion of Deaths to Cases Reported.

Locality.	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
St. Louis. 1 death to	3½	3⅗	2½	4	4	3	3	3	3½	4	5	4½
New York. 1 death to	2¼	2 1/10	2⅛	2⅛	2½	2½	2½	1¼	2	1⅝	2¼	2⅝

The monthly incidence of the disease is a matter of interest in studying the disease in connection with causes, such as will be mentioned more particularly later on. There seems to be a tolerably general law governing its increase after an invariably healthier period occurring irregularly during the summer months.

Table showing Deaths by Months.

Place.	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
Baltimore, 1885.....	27	10	11	11	10	10	8	7	17	32	30	17
St. Louis, 1885-1886...	74	52	64	41	41	53	58	89	129	161	178	151
Chicago, 1885-1886....	149	109	102	128	118	114	87	119	137	186	218	183
New York, 1885-1886..	263	270	255	239	244	245	234	175	172	252	310	393
Ontario, 1885	87	70	100	64	62	53	64	62	81	91	129	132

From the table just given it would appear that with August at times, but especially with September, the increase of mortality from Diphtheria begins, usually reaching its height in November. At this point it remains stationary or declines somewhat, albeit in January and March there is occasionally a notable prevalence of the disease.

2. *Distribution of Diphtheria.*

(a) Geographical Distribution.—In the numerous statistics of Diphtheria given in the Diagrams and Tables, I have endeavoured to show the extent of prevalence of the disease in countries, states, and cities from which statistics of cases and deaths were obtainable. From Hirsch's invaluable hand-book already referred to, I propose to give a few illustrations of the *pandemic* character of the disease, and of its having the characteristics peculiar to epidemic diseases. He says: "The history shows us also a peculiarity in the comportment of Diphtheria as an epidemic, which distinguishes no other epidemic disease in so decided a manner. I mean the cyclic character of its epidemic or pandemic recurrences, a character which comes out very definitely in the historical sketch just given. The several cycles have extended over periods of various lengths, many of them only a few years and others lasting several decades." Without referring to the imperfect history

of past centuries I have to quote Hirsch's remarks: "That certainly as regards our own time we have to deal with a new general outbreak of the disease; . . . but it is borne out also by the almost unanimous opinion of the most experienced observers of our day, that the disease in its epidemic outbreaks came upon them as an absolutely new thing." "This new era in the history of Angina Maligna (Diphtheria) begins, for the larger part of Europe and North America, at almost all points with the years 1857 and 1858, a little earlier in some countries than in others; and it is certainly a very notable thing that the time of its first appearance as an epidemic in distant parts of the world, such as India, China, Australia, Polynesia, Tunis, and the like, coincides with the outbreak in the regions mentioned. The disease showed itself, accordingly, in the form of a typical pandemic, in the strictest sense of the word. Of its starting point we can form no opinion, although there is no doubt that some parts of this great world's pestilence were dependent on other parts of it through the medium of a communicable morbid poison." Next to France in the order of being invaded comes the Iberian Peninsula, Holland and England; then Germany, Russia, and North America; a little later the Scandinavian Kingdoms; and lastly Italy and the south-east of Europe." I may remark in passing that Hirsch's quotations from many prominent local writers in France and elsewhere, show that the disease exhibited there, what we have noticed concerning it at the present day viz., that the dates of its appearance in different regions comparatively contiguous have, again and again been separated by intervals of several years—pointing out the fact of these outbreaks being through the medium of a communicable morbid poison. This peculiarity of the disease is shown further in the fact that the spread was not sudden but gradual in almost every case cited. Thus in Holland in 1859-63, amongst a population of 3,000,000 there were only 1,973 deaths, or 400 per annum; in 1866-70 they numbered 2,914, or a yearly average of 600. As shown in the English statistics given for 1884, the south-eastern counties to-day show more than an average prevalence of the disease; while, as Hirsch states, it was supposed to have been introduced to England from Boulogne in 1857, and the first cases occurred in London and the southern counties of Kent, Essex, Surrey, Hampshire, Devon and Cornwall. Within two years it had spread to Scotland. According to Christison the disease had acquired the character of an epidemic by 1863. Localized epidemics appeared from time to time in Scotland up to 1875. Similar statements are made by Hirsch regarding the progress of the disease in Germany since 1856, and he remarks regarding a number of places where it appeared in those years, that for the most part they have become permanent seats of Diphtheria.

In the countries of Austro-Hungary it spread with extreme slowness, and not till 1875 did the disease become epidemic for the first time in Vienna.

Appearing noticeably in Southern Russia in 1872, it had spread widely and very destructively by 1879. "The victims were numbered in every village by the hundred, and in every *commune* by the thousand. The children were exterminated."

In Sweden, from 1863 to 1870, the cases officially reported numbered 18,156, of which 4,176 were fatal; in Norway, from 1866 to 1870, there were 9,122 cases, and 1,649 deaths. Both in 1856 and 1860 it appeared in Iceland, and, more or less, completely overran the whole island. From 1861 to 1871 it prevailed with greater or less intensity in different years, over nearly all Italy, and in recent years has appeared extensively both in Greece and Turkey.

Since 1856 it has become generally diffused over North America, and as we now know, has tended to increase rather than diminish under the ordinary municipal regulations regarding it. In South America it seems to have been prevalent in certain quarters, even earlier than 1858. It has appeared at various points on the coast of Africa, more noticeably in the southern, more temperate portions; but in the Northern French provinces it has at times been very fatal. Disastrous outbreaks have occurred in Syria and Persia; while India and China have not been free from it. In 1866 it appeared with frightful violence in P'ekin, causing, it is estimated, 25,000 deaths. The years 1858-60 saw it more or less prevalent in Tasmania and Australia. From these abstracts the extent and persistence, as well as the peculiar characteristics of the disease as regards its spread, are well set forth. *No country is free from it, and no climate is fatal to its existence if once introduced.*

(6) *Local Distribution.*—Many factors seem to enter into the discussion of this part of the subject. At times it has seemed as if it was a disease peculiar to the lower strata of society who exist in the poorer and less sanitary portions of a town, or in filthy farm-houses with unsanitary surroundings; but its frequent incidence amongst those classes of a city, supposed to be in large measure free from similar surroundings, has led to the denial of the first assertion. For instance, Thoresen, in his account of an epidemic in Norway in 1861, is quoted as saying, "That bad sanitary conditions, such as unwholesome, damp, dingy and cramped dwellings, can add to the malignancy of the disease I do not wish to deny; but that it may be seen breaking out and assuming the worst type under circumstances the most favourable, while in small and poverty stricken huts it runs a perfectly mild course—of that I have been convinced time after time." According to Hirsch, Seitz, of Munich, says: "Thus we see that the disease has existed for years here, among all circles of the inhabitants, both rich and poor, in families belonging to the aristocracy as well as those belonging to the working-classes." As to the value of these quotations from the sanitary standpoint we shall have something to say later on.

As will have been noted in the statistics of prevalence of the disease in America, Denver, 5,212 feet above the sea, had the highest mortality of any of the cities quoted, in 1880. Fatal epidemics on the slopes of the Himalayas have been recorded, and the highlands of Peru have not been free from its ravages. As regards its connection with certain geological formations, Hirsch quotes Geissler in his history of Diphtheria in Saxony as saying, "That any particular character of soil has afforded protection against the spread of the malady can nowhere be made out." Several cases, as that amongst the crews of American men-of-war in Chinese waters, have been recorded where the disease has become epidemic on ship-board. Notable instances have occurred within the past five years in Ontario, where the disease has for a time been unusually prevalent on the central plateau (1,000 feet above sea-level) of the Province, while in other instances decimating epidemics have occurred amongst children in settlements situated upon *gneissoid* strata and surrounded with the purest air blowing over the surrounding ever-green forests. Isolated farm-houses in healthy districts have time and again been visited with the disease, with apparently no trace of its having been introduced; and the suburban houses of gentlemen on lofty situations near Toronto have had fatal visitations of the disease, while within three-quarters of a mile, on the level below the hill, the homes of market gardeners and milkmen, surrounded with organic accumulations, have borne what seemed a charmed immunity.

(8) *Distribution of the disease amongst individuals.*—Everywhere the same statement is made that as a rule the disease presses with special fatality upon children, especially from three to ten years old; and yet notable instances are known to me wherein this apparent law has failed. During the recent outbreak in the Institution for the Blind at Brantford, while the disease began amongst the pupils in a lad of 15 years, the chief proportion of 25 cases occurred amongst those of more mature years.

No statistics that I am aware of show that it is more fatal to girls than to boys, or *vice versa*. It is stated, in quotations by Hirsch, regarding several epidemics in the United States that the negro children, living in most unsanitary conditions, have enjoyed practical immunity from the disease. In order to show the fallacy of this belief I have obtained the following facts from Dr. Stewart, Medical Health Officer, Baltimore:

HEALTH DEPARTMENT, CITY HALL.
BALTIMORE, Feb. 21st and 23rd, 1887.

PETER H. BRYCE, M.D.,
Of Provincial Board of Health, Toronto, Canada.

MY DEAR DOCTOR,—Your esteemed favour of the 18th inst. was duly received to-day. I have never seen the statement that the negro was "practically exempt from diphtheria" in the South. This is not the experience in Baltimore, so far as I am aware, and I am not prepared to accept it as a statistical fact. I suspect that the exemption, if existing among the negroes of the South, before the war, was due to their healthful lives; living in the open air, and at night always sleeping near an open fire all the year round. Since writing the above, my secretary, Mr. A. R. Carter, has made for me the enclosed table, which speaks for itself, and I hope may prove satisfactory to you.

Very sincerely yours,
JAMES A. STEWART, M.D.,
Commissioner of Health and Registrar.

HEALTH DEPARTMENT, CITY HALL,
BALTIMORE Feb. 23rd, 1887.

Comparative Table, showing the total number of deaths from Diphtheria, of white and coloured, in the city of Baltimore, during the period of ten years, 1877-1886, inclusive. Also total mortality from all causes.

YEARS.	Deaths from Diphtheria. — Whites.	Deaths from Diphtheria. — Coloured.	Total Deaths from Diphtheria.	Total Mortality. — Whites.	Total Mortality. — Coloured.	Total Mortality, all Causes. — Whites and Coloured.
1887..	360	63	423	6,059	1,851	7,910
1878.....	262	41	303	5,159	1,574	6,733
1879.....	262	36	298	5,883	1,735	7,618
1880..	263	30	293	6,170	1,873	8,043
1881.....	552	87	639	6,719	2,097	8,816
*1882.....	607	100	707	6,878	2,045*	8,923
*1883,.....	520	71	591	7,125	2,255*	9,380
1884..... ...	317	26	343	6,398	1,895	8,293
1885.....	243	9	252	6,324	1,829	8,153
1886.....	179	11	190	6,477	1,862	8,339
Totals.....	3,565	474	4,039	63,192	19,016	82,208

* Small pox epidemic. = { 1882—551 Deaths / 1883—633 Deaths } 1,184 Deaths.

Respectfully submitted,

A. N. CARTER,
Secretary.

Hirsch quotes Felix as stating, regarding the outbreak at Bucharest in 1868-69, that, "It is a striking thing that the Jewish population of the city (more than 14,000 in number) have remained almost exempt from the epidemic, notwithstanding the bad sanitary conditions under which most of them live."

An interesting fact in connection with the well-known prevalence of the disease in France is obtained from Ontario Statistics. In the most easterly townships of Ontario there is a very large proportion of French *habitans* from Quebec, while in the most westerly townships along the Detroit River is a large French population whose ancestors migrated there many generations ago. Diphtheria prevails in both these districts, to an unusual extent, as will be seen from the following figures:—

County.	Year.	Deaths from Diphtheria per 1,000 of population.
Prescott and Russell..	1881-1885.....	1.2
"	1885.....	3.35
Essex.....	1881-1885.....	1.06
"	1885.....	1.92

Before, however, ascribing this prevalence in these districts to any racial tendency, the influence of the fact that the farm-houses and surroundings are not always of the best from a sanitary standpoint, must not be overlooked.

The general experience of physicians will in a large measure bear out Sir John Rose Cormack's statement that "Diphtheria is not a hereditary disease; but a special aptitude to receive and develop the poison evidently pertains to certain individuals and families. The statement is borne out by the statistical enquiries of Morelli, Nesti, and others, in relation to the recent epidemics of Florence; but the facts which establish it beyond a possibility of doubt are the numerous cases of particular families being desolated by diphtheria at intervals of years, and when the members attacked were widely separated." Making all due allowance for the possibility of contagion being carried in these supposedly separate outbreaks, as well as for the well known mythical character of most popular reports of disease, there can be but little doubt that the scrofulous constitution, with a tendency to diseases of the lymphatics, is less likely to throw off the *materies morbi* of Diphtheria, once incepted, than would another with greater firmness of tissue. The same fact will likewise have been noticed in regard to the comparative immunity of physicians, while mothers and others continually exposed, or worn out with watching and anxiety, quite frequently become victims of the disease.

3. *The Etiology or Immediate Cause of the Disease.*—Of the many diseases which have within recent years come under the notice of physicians none has been, either as regards causation or treatment, surrounded with greater difficulties, or investigated with greater assiduity than Diphtheria. Regarding the diversity of views held by Bretonneau, and many eminent authorities since his time with reference to Diphtheria, Hirsch has said, "Into this chaos no light could come until medical science had advanced so far as to recognize *that causes of various kinds might underlie one and the same anatomical* morbid process, and conversely, that *one and the same morbific cause, operating in a given tissue, may be able to call forth, under varying circumstances, nosological forms of different sorts.*" Amongst the most recent and scientific attempts at isolating the specific *cause morbi* of Diphtheria, are the experiments carried out on the one hand by Wood and Formad in America, under the authority of the National Board of Health, in 1881, and on the other by Dr. Loeffler in Germany, in 1884.

I propose to give the results of these various experiments only so far as they seem to me to be definite and practical. It seems hardly necessary to state that, knowing as we do so well the infective nature of the diphtheritic exudation, inoculation experiments by several investigators have shown that the disease may be artificially produced. But as I propose to show from extended quotations from Dr. Loeffler of the only thorough experiments made with the view of isolating the *specific* cause of the disease the question of the unity of species of the living organisms causing the disease, has, as far as I am aware, approached a solution only since the date of his brilliant investigations.

As might be expected, the chief primary difficulty of the investigation lies in the fact that the mucous membrane of the whole respiratory tract must become the receptacle of whatever microbes may exist in inhaled air.

Oertel has described the *micrococcus diphtheria*, as also Eberth and Klebs; Ewart and Simpson have found a spore forming bacillus on the tonsils, as also Dr. H. C. Wood, Baltimore. Letzerich describes the specific diphtheritic microbe as a true hyphomycetous fungus; while Laycock described the specific organism as the oidium albicans. The total result of these varied assertions is, however, contained in Loeffler's remark: "Of course no satisfactory conclusions could be drawn from inoculations with the cultivation of impure material." Recognizing this, he set to work to elucidate the subject by the methods of Koch, but encountered his first difficulty in the fact that, owing to the extraordinary rapidity with which diphtheritic exudation takes place, the organism present in the epithelium at the outset of an attack "may easily be absent at a later stage," as also that local applications may quickly remove it. Twenty seven cases in all were investigated by him, and they fall into two classes, according to the organism present in the largest numbers. In the first class chain forming micrococci play a prominent part. (*Vide Oertel.*) It is noted in this connection that "chain forming micrococci, morphologically identical with those found in Diphtheria, are present in various other diseases which are accom-

panied by lesions of the mucous membrane *e.g.*, variola, typhoid and puerperal fever, etc." Presumably accidentally present in these it may be fairly supposed that they are likewise accidentally present in Diphtheria. "In the second class of cases the bacilli first described by Klebs, are present. These bacilli occur exclusively in those typical cases which are characterized by a thick false membrane extending over the mucous membrane of the fauces, larynx, and trachea, the mucous membrane being traversed by enormously dilated and over-filled vessels. Below the masses of bacteria of different kinds which cover the surface, amongst which may be the streptococcus before referred to, Klebs' bacilli are found arranged in little groups. They became intensely stained with methylene blue. In one case almost the whole false membrane consisted of colonies of this peculiar bacterium."

By cultivations in nutritive jelly, Loëffler obtained from materials taken from internal organs, in five cases, the chain-forming micrococcus; but the result of a large number of inoculations on mice, dogs, rabbits, guinea pigs, birds, and monkeys, shows that the micrococcus must be only accidentally present. He further found that the effects produced by it were the same as those produced by Fehleisen's erysipelas micrococci.

The following results were obtained from the cultivation of the bacilli on blood serum: By successive cultivations he isolated the bacilli and obtained pure colonies of them on the serum. In four typical cases, membrane was taken from the throat with forceps, frozen and sections made. All four sections showed the bacilli after staining. "On the surface were numerous micrococci and below that in the part of the membrane rich in cells were groups of bacilli, and then followed the broad fibrinous zone containing few cells and no bacteria. It was from the deeper part that the material was taken for cultivation in all the cases, and that identical organisms were obtained from all the patients was proved, both by their morphological and biological characteristics" * * * The diphtheritic bacilli are non-motile, and are very quickly and deeply stained with methylene blue; some of them are straight, and some slightly curved. They vary considerably in length, being on an average about the length of the tubercle bacillus, but they are twice as thick. The longer ones are commonly composed of several members, and where these are connected there is frequently a slight, knotty enlargement." They do not produce spores and are destroyed by exposure for half an hour to 60° C. (= 140° F). Their length of life seems to be about three months. They require for development a temperature above 68° F. Inoculation experiments gave a number of interesting results. By subcutaneous inoculation the following results were obtained: "Rats and mice enjoy complete immunity, while guinea-pigs fall easy victims; their death appears to be due, not to the spreading of the bacillus throughout the body, but to a poison produced at the seat of inflammation, which causes an alteration in the walls of the blood-vessels leading to hemorrhages throughout the body. Small birds, canaries, finches, etc., become infected as certainly as guinea-pigs, but more rapidly. Rabbits and monkeys show localized effects of septicaemia but do not develop true diphtheria. In the guinea-pigs infection through the uninjured mucous membrane was proved to be possible—not, however, in other animals."

"While from the experiments it is impossible to say positively that these are the microbes of Diphtheria, the following facts are evidence in favour of their specific character:—They have been found in a large number (13) of typical cases of Diphtheria, with fibrinous exudation on the fauces and in a constantly recurring arrangement; they lie in the oldest part of the membrane, and penetrate deeper than any other bacteria: Cultivations of these organisms introduced beneath the skin of guinea-pigs and small birds kill them, producing whitish or hemorrhagic exudations at the point of inoculation, and extensive œdema of the subcutaneous tissues, the internal organs are not affected, as is the case with man; introduced through a wound of the trachea in rabbits, fowls and pigeons, the poison produces a false membrane, and also if placed on the scarified connective tissue of rabbits, and on the entrance of the dilated vagina of guinea-pigs; in addition to the formation of false membrane, there has been observed the characteristic, serious alteration of the vascular walls, which shows itself by bloody œdema, hemorrhage into the tissue of the lymphatic glands, and effusion into the pleural cavity. The bacilli have therefore the same effect as the diphtheritic virus. They also have the property,

in common with that virus, that they kill young animals generally more easily and quickly than old ones."

Such, then, is an account of the most recent complete experiments I am acquainted with made with the endeavour to isolate the micro organism which is supposed to cause Diphtheria. From them it would seem almost a certainty that the true *causa morbi* has been isolated, but whether this organism is that which is alone capable of developing the disease, is still fairly a matter of question. The fact that there are several micro-organisms found present in putrefactive animal substances, having, as stated by Klein, the property of multiplying in human blood, thereby setting up a true septicæmia, as well as such experiments as those of L. C. Wooldridge, M.B., with the bacillus producing a fatal septicæmia in guinea-pigs, etc., by which it has been shown that the soluble chemical products of such a bacillus when cultivated in albumen, act as rapid poisons, paralyzing the nerves of respiration, leave still much room for further investigations into the subject. The numerous instances of undoubted cases of Diphtheria occuring *sporadically*, incline us very much to the belief of a possible exciting cause originating in the manner toward which the experiments of Dr. Klein point; although Loeffler's experiments give much force to the remark of Hirsch, that, "from the point of view which the science of the moment assumes in looking at the nature of the specific cause of diphtheria, the theory of its *autochthonous* origin would certainly seem to be untenable—unless we are to give up the principle of *omne virum* ex *vivo* in so far as concerns the world of living things which are placed at the lowest step of the developmental ladder."

4. *Exciting Causes of Diphtheria.*—Although for the development of our subject it has seemed proper to devote a considerable space to the history and immediate cause of Diphtheria, that which we are now to consider must undoubtedly be of the first interest to the sanitarian. From all that has been said in the discussion of the *immediate* cause of the disease, it will at once be evident that the presence of organic matter, either vegetable or animal, is—apart from those cases where infection is immediate, *i. e.*, from person to person, as by inhaling the breath—of the greatest possible importance. It must not be forgotten in making this statement that its accuracy has, especially in accounts of epidemics in earlier periods of the present century, been by many authorities strenuously opposed; but, apart from the fact that till within the last twenty years biology can be said to have scarcely had a scientific existence, it only requires one to have some experience of cases of Diphtheria, or indeed of any contagious disease, to understand how extremely difficult it is, and how seldom any thorough investigation of the possible factors conditioning the disease is made. The paramount influence of *unsanitary conditions* upon the occurrence and epidemic diffusion of the disease, as now held by many English, German, French and American physicians is, as stated by Hirsch, well summed up by Dr. Ernest Hart.

"Zymotic desease is mostly bred by poverty out of uncleanliness, and diphtheria follows a general law of what may be called the phytogenesis of zymotic poisons in this respect. It takes up its abode by preference in the hovels of the poor, where the stagnant and pent-up air reeks with animal effluvia—where human beings and domestic animals 'pig' together; above all—and this is the centre toward which all sanitary precautions should ever tend—where the poisonous cesspool and the unflushed privy-pit taint the air with subtle effluvia, that seize their victims by the throat and bring death within their foul touch. The extreme tendency to limited action, which marks those epidemics, and which was fully illustrated in the French epidemics, as it has been also in the English, indicates the presence of domestic predisposing causes, amongst which we rank these obnoxious nuisances as of prime activity." Nothing in a general way can be more true than this statement, but it does not by any means state the whole truth; for, as we have already seen, the disease is much more prevalent from year to year in the United States and Canada, amongst a population better housed, better fed, and presumably better prepared, as a whole, to resist the attacks of disease than are the majority of the inhabitants of Great Britain. Where, then, are we to find the explanation, if Dr.

Hart's statements be correct? Is it in our climate, is it in the extreme changes of our seasons? It hardly can be said to be either, since its geographical history shows it to be at times pandemic, and to exist as virulent epidemics in hot climates and in Canada in the hot summer months: while further, as the following table shows, other acute diseases of the respiratory organs are much less prevalent in America than in England.

Deaths from Consumption and Pneumonia in certain Cities for the year ending 1885.

Cities.	Population.	Consumption. Total Deaths.	Death Rate per 1,000 of Population.	Pneumonia. Total Deaths.	Death Rate per 1,000 of Population.
Brooklyn	665,602	1,965	2.95	1,446	2.18
Baltimore	417,220	*1,270	3.04	581	1.39
Chicago	664,634	1,162	1.74	736	1.10
Glasgow (includes other acute pulmonary diseases)	534,624	1,562	2.9	3,103	5.8

**The unusually high death-rate of Consumption in Baltimore occurs amongst the negro population.*

While the teachings of this Table have a most important bearing on the point we are discussing, I think, however, that the fact that the ordinary contagious diseases are probably less prevalent in America than in Britain, must cause us to recognize that climate and especially certain seasons have some definite influence on the prevalence of Diptheria.

But remembering the fact that, in spite of the high death-rate of young children amongst the poorer classes, as also of the very large proportion of lung diseases in England and Wales, the death-rate there has been reduced to less than 20 in the 1,000 of population, we have no alternative but to conclude that the explanation of the relative immunity of that country from Diphtheria lies (1) in the more complete organization of local sanitary authorities, as seen in the matter of notification of disease, and (2) in the much more thorough systems of town sewerage and house construction which there exist. The following extract has in the highest degree importance for us; I quote from the preface of the report on "The Main Drainage of the Houses of Parliament, Westminster, London, 1887," by Isaac Shone, C. E., an extract from Professor Huxley's address before the Society of Arts, 1881:—"Disagreeable and imperfect as the old cesspool system was, it was attended with very little danger as compared with that which waits upon the modern water sewage system, if this system is imperfect. If it is perfect, then it is very perfect; and, in fact, it is the only possible system in great cities in the present day. It has, however, this terrible peculiarity, that if it is imperfect, it becomes the most admirable machinery for distributing the death and disease which may be found in one locality as widely as possible into others, and into the very houses of the people."

Referring to sewered towns in the United States, unless it be a few of the largest, I take it as unnecessary of proof that they are similar to Canadian towns and cities, and speaking from a considerable knowledge of these, I would say that Tyndall's remarks are too terribly true. Take Toronto, as an example. During last year, some 2,500 houses were erected, the great proportion being on sewered streets, and, from what I know, every owner or architect was a law unto himself. Assuming 2,000 houses to have been connected with sewers, we have as many canals by which sewer air may possibly be conveyed to a population approaching 10,000 individuals. Assuming further that the other houses, some 18,000, containing 90,000 more persons, are connected with sewers, we have a total of 20,000 houses holding possible communication with the terrible unknown. If we admit that five houses in every hundred have sewer gas entering them through drain and soil pipes, laid by *any* person, laid ignorantly and cheaply, knowingly and wickedly, inspected by nobody, or by

nobodies inspected, we would then have 1,000 houses, and 5,000 men, women and children in them, day in and day out, breathing the products of decomposition; inhaling death sometimes slowly, at others as with our children, with the swiftness almost of a thunderbolt; and still we wonder how it is that nearly 2 children in every 1,000 of this 100,000, or 1 in every 25 of these 5,000 men, women and children die of Diphtheria.

Referring, further, to the conditions of our provincial towns and cities, we have, in addition to those just mentioned, the facts that except in a few no systems of sewers exist; while the public drains, when existing, often connect directly by old and decaying wooden drains, wholly untrapped, with kitchen sinks and cellars; and further, in these places well-water is in common use, and pumped from a soil yearly becoming more polluted with organic matter from yards, stables and privies. That common experience in Ontario connects Diphtheria with such cases, may be illustrated by the fact that in answers received from 138 reporters wherein 1,149 cases and 328 deaths were stated to have occurred within nine months in 1886, the exciting causes given are:—"Impure water; wells too near privies; vitiated air from, damp, ill-ventilated cellars and filthy surroundings; houses built on or too near the ground, thus shutting out air from the foundations; cellars without any drains, or if present, improperly constructed and trapped; and, finally, poverty, uncleanliness of the person, and exposure to the inclemency of the weather."

In the report of an investigation made personally into an epidemic of Diphtheria in Smith's Falls three years ago, where 36 sets of cases occurred in as many houses, including 91 cases in all and 24 deaths, or 26 per cent., I find the following:—"Making every allowance for imperfect sources of information, for wrong information and mistaken inferences, the facts detailed in the appended tables seem to give ample proof of (1) the contagiousness of the disease, (2) of how its severity is intensified by bad sanitary surroundings and (3) of how in some cases, apparently, the disease originates in unsanitary conditions apart from direct contagion." In the instance of the family wherein the first case occurred it is stated that "the condition of the premises is significantly suggestive of Diphtheria. It is described "not good, a number of tenants have privies on the same lot; they are very close and a butcher shop is next door, the water is got from a public pump." Again, "it may be mentioned in connection with the town hall cases, that a cistern was in part under the rooms into which the caretaker's family was crowded. The night in which the first child died was that on which a dancing assembly was present in the hall above. Very shortly afterwards one, and probably two, of the young ladies attending the ball contracted the disease." As an interesting example of infectiousness I quote the following:—"Another centre from which apparently the disease spread was Percey's tailor-store and shop. The family lived over the store. The disease broke out here. The father went back and forth from rooms to shop where sewing girls worked and to which customers came. One of the Brennans, in whose house occurred six cases and two deaths, worked in the shop and apparently conveyed the disease home."

That the unsanitary factor is a potent one from all that has been said, must be evident to every one, and that it has hitherto seldom been dissociated from the other equally potent fact of infection, is just as plain. From the following table, extracted from the annual report for 1886, of Dr. Carson, Medical Health Officer of St. Louis, we may fairly draw the conclusion that the latter (*i.e.*, immediate infection) is the more common way by which the disease is disseminated:—

Percentage of Death-rate from Diphtheria in each of the Twenty-eight Districts of St. Louis to the total deaths from all causes in each District.

Districts.	Total Deaths from all Causes.	Total Deaths from Diphtheria.	Percentage of Deaths from Diphtheria to Total Deaths.
District No. I	289	12	4.15
do II	177	10	5.64
do III	269	24	8.92
do IV	632	32	5.06
do V	421	59	14.01
do VI	135	26	19.99
do VII	271	35	12.91
do VIII	150	11	7.33
do IX	307	55	17.91
do X	505	21	4.15
do XI	191	45	23.56
do XII	564	40	7.09
do XIII	177	24	13.55
do XIV	392	55	14.03
do XV	692	13	1.87
do XVI	360	54	15.00
do XVII	278	11	3.95
do XVIII	412	18	4.36
do XIX	230	16	6.95
do XX	324	18	5.55
do XXI	173	26	15.02
do XXII	112	12	10.71
do XXIII	157	7	4.45
do XXIV	267	51	19.10
do XXV	14	3	21.42
do XXVI	69	7	10.14
do XXVII	418	13	3.11
do XXVIII	252	21	8.33
Totals	8238	719	10.29

We here see that there is no very marked connection between contiguous districts of the city as regards prevalence of the disease, the disease being, on the whole, proportionately to the totality of deaths, quite as prevalent in the new as in the older districts. Whether this is true as regard the deaths in relation to population, I have not the data necessary for the calculation. The fact, however, that contiguous wards show no specially close relations, appears to me to prove that isolation of the disease has been very imperfect; for it would seem as if the disease once introduced in a ward would light up sometimes into a flame, while at others, as is the case with sporadic cases of many contagious cases, the first is isolated and no second occur.

Closely related with these conditions favouring the propagation of the disease, is the question of the influence of cold upon its prevalence. In the extended tables already given we will have noticed that there is evidence of a general decline of the disease in warmer weather. At first sight this fact seems opposed to the putrefaction theory of the disease; but the real circumstances of the case are so well set forth in the following extract from Hirsch, that little further need be said on the point:—"We should bear in mind . . . that the prevalence of the disease mostly goes with the cold seasons of the year; and that is a circumstance which on the one hand sets the putrefaction theory in a still more ambiguous light, while on the other hand it raises the question whether it is not the changed mode of life following the cold weather, and most of all the artificial heating and keeping warm of rooms, the bad ventilation and the saturation of the atmosphere with watery vapour, in short the production of what Krieger calls 'an artificial climate'—whether it is not all these things acting upon the organism, and particularly upon the organism of the child, that go to make the real predisposing cause of the disease. . . . But there is another, if subordinate, circumstance connected with the prevalence of the disease during the cold

months, namely, the great multiplication of the perils of contact, while that season lasts, between the more or less crowded inmates of the heated rooms, and the increased opportunities thereby offered for the transmission of the disease; and that is a circumstance, it is easy to see, which will tell much more among those of the population who are less well off than among those at the opposite pole of well-being, and will serve to explain without difficulty, in my opinion, the fact so often observed of diphtheria being prevalent among the proletariat."

Regarding the meteorological conditions which tend to increased prevalence of the disease it may, in a word, be stated that while undoubtedly there are certain periods when there seems to exist a special tendency for *sore throat* to take on a diphtheritic form, yet it must be admitted that no sufficiently extended experiments regarding the influence of *ozone*, as an irritant of the mucous membrane, have been made from which it can definitely be inferred that it is an unvarying element in the question of exciting causes. In connection with meteorological conditions, the further question of soil dampness in its influence in the causation of the disease is worthy of being discussed here at some length. As, however, the conditions under which moisture influences the development of bacteria were fully discussed in my report on "Malaria in the Valley of the Grand River," printed in the Report of 1884, as were also the physical conditions which cause the varied distribution of bacteria from the soil, etc, into the atmosphere, I would refer those further interested in the subject to peruse that article.

5. *Measures for Limiting the Spread of the Disease.*—From what has been said regarding the characteristics of the disease as being those of a true zymotic, of the nature of the cause as being due, according to the best evidence, to bacteria, and of the conditions apparently favoring the development and dissemination of the disease, it will not be difficult to see that the question of limiting its spread is the same in large measure as that for contagious diseases in general. Such may especially be said as regards limiting the spread of the disease from person to person where it already exists: but since Diphtheria, as well as typhoid, seems to have certain special relations with the putrefaction of albumenoid matters, not common to the eruptive zymotics, it would appear that in a very special sense we have to deal with the question of how best to prevent individuals, but especially children, from being exposed to the malign influences of organic filth.

In a recent edition of the pamphlet, on "Rules for Checking the Spread of Contagious or Infectious Diseases," issued by the Board, these details have been dealt with very fully from both the individual and municipal standpoint. Without entering into the minute detail of the pamphlet, I shall, however, before referring to some of the reasons why preventive measures are taken, and to some of the more obscure phases of the life history of the micro-organisms of these diseases, give the

REGULATIONS DRAFTED BY THE PROVINCIAL BOARD OF HEALTH re DIPHTHERIA.

(Submitted for Approval.)

Whereas it is desirable to prevent Diphtheria from becoming epidemic in Ontario, the Board of the Provincial Board of Health, subject to the approval of the Lieutenant-Governor in Council, enacts the following regulations:

1. Whenever Diphtheria is present in any municipality in Ontario, the council of every such municipality shall at once appoint one or more sanitary policemen for the purpose of assisting to arrest the spread of the disease, and the Council of any municipality in Ontario whom the Provincial Board of Health shall require the appointment of one or more sanitary policemen as necessary shall also make such appointment. If the Medical Health Officer of the municipality, or the Provincial Board of Health, require the appointment of any specified number of sanitary policemen, then such number shall be appointed. In case the council of a municipality neglects or refuses to make the required appointments, the Provincial Board of Health may appoint as many sanitary policemen as it deems necessary.

2. Any default on the part of the authorities of any municipality in taking immediate and effective action in carrying out the regulations of the Provincial Board of Health, or of any of the Health Acts of this Province, or of any Health By-law in force in the municipality, shall be at once reported by the Medical Health Officer to the Secretary of the Provincial Board, in order that the said Board may take such measures as it deems requisite for placing the said municipality in a position, as regards its sanitary arrangements, to effectively combat the said disease.

3. The Medical Health Officer of every municipality having received information of a suspected case of Diphtheria, shall immediately enquire into the facts either by consultation with the attending physician or by his own personal observation, or by both.

If the characteristic symptoms are not sufficiently developed at the time of investigation, the Medical Health Officer shall keep the case under his personal observation until the true nature of the disease is discovered.

Until the time arrives when, in the opinion of the Medical Officer, all cause for suspicion or danger is past, the suspected case shall be isolated and otherwise dealt with in the same manner as prescribed for Diphtheria.

4. On the occurrence of the first, or any, case of Diphtheria in a municipality, the Medical Health Officer shall at once remove the person attacked to the isolation hospital, tent, or other place provided under section 44 of the Public Health Act, 1884, or cause such person to be otherwise efficiently isolated in the house where the disease exists and shall take proper measures for placarding houses for the disinfection of personal clothing and houses, or if necessary the destruction of all clothing which may have been exposed to the contagion, and for the disinfection and purification of every conveyance, rail-car, steamboat, sailing-vessel, carriage, or other vehicle, which may have been exposed to the contagion.

5. Whenever, in the opinion of the Medical Health Officer, it is absolutely necessary for the safety of the public that a case of Diphtheria be isolated in a hospital or hospital tent, he shall be empowered to supply, at the expense of the municipality, a vehicle for the purpose of carrying said person to the hospital. He shall also supply nurses and such medical aid and other necessaries as in his judgment are required, and charge the cost of same to such person or persons as are liable for his support, if able to pay the same, otherwise to the municipality.

6. He shall further keep under observation all persons who have been exposed to contagion, and shall secure the rigid observance of the following regulations, in addition to the provisions of the Public Health Acts and all other sanitary regulations and enactments:—

(Vide Public Health Act, 1884, Sections 46, 49, 52, 59, 60 and 62; also Public Health Acts of 1885 and 1886.)

(1) No householder in whose dwelling there occurs a case of Diphtheria, shall permit any person suffering from the disease, or any clothing or other property, to be removed from his house, without the consent of the Medical Health Officer.

(2) No person sick with Diptheria shall be removed at any time, except by permission and under direction of the Medical Health Officer; nor shall any occupant of any house in which this disease exists, change his or her residence to any other place without the consent of the Medical Health Officer, who shall prescribe conditions as set forth in pamphlet No. 15 issued by the Provincial Board of Health, entitled "Rules for Checking the Spread of Contagious or Infectious Diseases."

(3) Except the attending physician or clergyman, no person affected with Diphtheria, and no person having access to any person affected with the said disease, shall mingle with the general public until such sanitary precautions as are set forth in pamphlet No. 15, issued by the Provincial Board of Health, to the satisfaction of the Medical Health Officer as attested by his certificate, shall have been complied with; nor shall any such person expose him or herself in any public place, shop, street, inn or public conveyance, without having first adopted such precautions.

(4) All persons named in the last preceding clause are hereby required to adopt for the disinfection of utensils, bedding, clothing and other things which have been exposed to infection, such measures as are set forth in pamphlet No. 15, issued by the Provincial Board of Health; and they are further required to satisfy the Medical Health Officer that such measures have been properly carried out.

(5) No person suffering from, or having very recently recovered from Diphtheria, shall expose himself, nor shall any person expose anyone under his charge who is so suffering, or who has recently recovered from this disease, in any conveyance without having previously notified the owner or person in charge of such conveyance of the fact of his having, or having recently had, such disease.

(6) The owner or person in charge of any such conveyance must not, after the entry of any so infected person into his conveyance, allow any other person to enter it without having sufficiently disinfected it under the direction of the Medical Health Officer.

(7) No person shall give, lend, transmit, sell or expose any bedding, clothing or other article likely to convey Diphtheria without having first taken such precautions as are set forth in pamphlet No. 15, issued by the Provincial Board of Health above cited, for removing all danger of communicating the disease to others.

(8) No person shall let or hire any house or room in a house in which Diphtheria has recently existed, without having caused the house and premises used in connection therewith to be disinfected to the satisfaction of the Medical Health Officer: and for the purposes of this section the keeper of an inn or house for the reception of lodgers shall be deemed to let for hire part of a house, to any person admitted as a guest into such inn or house.

7. In case of the death of any person suffering from Diphtheria, the Medical Health Officer shall at once upon notification of such death superintend the preparation of the body for interment; he shall cause it to be enveloped in a sheet thoroughly saturated with a solution of mercuric chloride in the proportion of one in five hundred parts (two drachms to the gallon). An outer sheet shall also be applied to prevent evaporation.

As soon as possible the body shall be placed in a coffin and surrounded by a quantity of chloride of lime, and the coffin shall be immediately thereafter closed. It shall be the further duty of the Medical Health Officer to see that the funeral be strictly private, and that all infected apartments, clothing and other effects be speedily and thoroughly disinfected; and that no such apartments be entered or occupied by members of the family or other persons until they shall have been so disinfected.

8. Penalties for the violation of any of the above regulations are those contained in Sec. 65, Public Health Act, 1884; and Sub-section 2 of Sec. 15, Public Health Act, 1885.

Assuming that the specific microbes of Diphtheria are *bacilli*, we naturally ask ourselves, what are their habits, where do they principally abound, what conditions aid or retard their development, what is their vitality, what destroys them, etc.? In order to answer these and many other questions we may put to ourselves, we have to discuss, as far as we know it, the life-history of bacilli in general. These micro-organisms are cryptogamic plants, multiplying both by gemmation and by formation of spores. Some bacilli,

amongst which Loeffler places Klebs' *bacillus diphtheriæ*, do not form spores. On this quality depends apparently the question of the vitality of any bacillus, since not only do non-sporing bacilli die much sooner than the spores of other bacilli, but the bacillus itself without spores is destroyed usually by a temperature of 60 C. (= 140° F.) maintained for a few minutes; while the spores, when not developing—as they do when kept warm and moist—require for their destruction a temperature of 103° C. (= 218° F.), maintained for some time. Should it be proved by further experiments that Diphtheria is caused by bacilli which sometimes do form spores, their vitality and the conditions under which they are destroyed will then be better appreciated. Assuming in the next place, that these micro-organisms, like most other bacilli, grow in materials other than the blood of man and certain animals, we can understand that the filth of rooms, of polluted soil, impure water, etc., will most probably keep them alive; in other words act as more or less perfect culture media, according to surrounding conditions. On no other ground, unless we admit that there is more than one species which causes Diphtheria, or that *bacillus diphtheriæ* has a life lasting much longer than that ascribed to it by Loeffler, viz.: about three months, can we account for isolated outbreaks, as in farm-houses, or for the occurrence of the disease in the same house at periods separated by many months. Should this supposition be true, then we ask where and in what materials do bacilli most abound? Every investigator, Duclaux, Koch, etc., assures us, that ordinary air contains very few microbes as compared with garden mold and most waters. These again vary greatly in the numbers they contain. Thus Miquel, by long-continued experiment, assures us that country air is much freer than city air; that the air of hospitals, houses, etc., contains infinitely more than even the open air of cities: that after winds the atmosphere contains very many more, and then after rain or snow it contains very many less than at other times; that there are many more in summer and autumn than in winter and spring. Koch informs us further that the relative numbers of bacteria, and of bacteria to fungi, vary according to the locality of confined air, and points out that both were very abundant in the air near the cages of his experimental animals; he found, too, that even winter outside air contains very many active spores. The upper layers of soil are especially rich in the spores of bacilli (Koch, Miquel, etc.); and Koch remarks that bacilli are always especially present in large number in the superficial soil around dwelling-houses. These, owing to their forming spores, are not readily killed by the drying out of the earth, etc. If in air and soil, they will very naturally be abundantly present in water, which is contaminated by both. Remembering, then, that spores have an almost unlimited vitality like many other seeds, when under conditions unfavourable to their development, and that their growth means simply that of the bacillus itself, we very naturally enquire, what seems at one time to aid and at another to retard their growth?

This, as regards zymotic diseases, has ever been a question of great difficulty, which so far, has been very imperfectly answered; but we may conclude that their free development depends:—

(1) Primarily upon abundance of seeds, of which the converse is of course equally true.

(2) Sufficient nutriment and of the proper kind.

(3) A proper temperature and sufficient moisture.

(4) No opposing influences.

Let us now discuss some of the apparently opposing influences. All our prominent investigators are seeking to determine these by unceasing experimentation, and amongst these influences the following have been, more or less well demonstrated.

1. Pasteur found that the virus contained in a culture fluid decreased in virulence, in other words, became attenuated through lapse of time, spores resist, however, the influence of time.

2. By later experiment he found that it was the presence of the oxygen of the air, in contact with a culture whose constituents had become exhausted, that caused the attenuation.

3. He further determined that spore-producing *bacilli*, do not spore or seed until a certain temperature of the culture fluid 45° C. (113° F.) is passed.

4. Virus, attenuated by exposure to oxygen for varying lengths of time, or as further proved, in cultures of varying degrees of richness, can be maintained in this state by further cultures repeated in the same manner, or by passing it through animals of differing susceptibilities; similarly by changing the culture medium, (a solution, or the body of an animal), the original virulence can gradually be restored. (Such a virus kept for a long time at the temperature of an ordinary room, gradually loses its virulence. *Vide* Pasteur, Koch).

5. Spores may be developed from *bacilli* of different degrees of virulence, and these retain "the degree of virulence peculiar to the bacterium from which it emanates."

6. The method by which a virus is introduced into the body greatly alters its effects. Koch has shown that *bacillus anthracis* introduced into the stomach of sheep, produced no effects, but that bacilli with spores similarly introduced caused death. He concludes that the natural digestive juices of the stomach destroy the bacillus. (This aids to explain the facts of anthrax and foot-and-mouth disease, being readily contracted from pastures, as soil contains especially the spores, and such bacilli as may be in it; *vide* Pasteur *re* spread of anthrax, by earth-worms).

7. It has by various investigators, been shown that the attenuation of a virus may be readily accomplished by its cultivation in a culture, to which antiseptics have been added (*vide* Chamberland and Roux *re* carbolic acid solutions, Klein *re* mercuric bichloride solutions, phenylacetic acid, phenylpropionic acid, etc.)

9. An interesting fact, allied to this, is pointed out by Dr. Cash in certain experiments, viz.: that by the injection of mercuric bichloride into animals, before inoculation with *bacillus anthracis*, etc., the disease is modified greatly, being much milder.

10. In a series of interesting experiments by Klein, it has been shown that bacteria introduced into a culture, become inactive, and sink to the bottom of the fluid, not from want of nutriment, but in consequence of the production in their development of substances poisonous to themselves, such as phenylacetic and phenylpropionic acids. In other words a specific bacterium in a given culture is self-limiting. It may not be so however, to every other, as—

11. It is well established by experiment on beer-wort, etc., that one bacterium, after another, as the fluid undergoes changes, will take possession of it as the *yeast* plant, *mycoderma aceti*, *mycoderma vini*, *penecillium glaucum* (lactic acid ferment) in deeper parts of the solution, utilizing the oxygen of the organic compounds.

12. Intimately associated with this are the facts that the growth of bacteria causes a loss of the contained oxygen of a solution, and that bacteria developed in cultures *in vacuo* become inactive. (Vide J. P. Laws, F. C. S.)

13. A fact of equally great interest is that which has by experiment been discovered by Dr. Dupré, by which he shows that periodical differences are shown by waters from the same source in their capacity for absorbing oxygen, and similarly finds that bacteria exhibit differences in the relative consumption of oxygen, necessary for their development.

14. But one more point need be added in this connection and it is, that, while excess of oxygen has not been shown to be inimical to bacteria, except by aiding their excessive development, thereby sooner exhausting nutriment, still ozone in a most marked manner, prevents the free development of bacteria, but especially those of the putrefactive processes as *micrococci*.

While many more points might be selected, showing on what basis, prophylactic measures are taken for preventing by vaccination diseases, as small-pox, anthrax, etc., and for limiting the spread of diseases by germicides, as mercuric bichloride, still the reasonableness of cleanliness, by destruction of any organic refuse, thereby lessening bacterial *pabulum*, of the necessity for the never ceasing ventilation of sick rooms and infected dwellings by the oxygen of fresh air oxidizing organic matter and attenuating the virus, as well as the *raison d'être*, of other ordinary sanitary measures, are so well illustrated by all this experimental evidence, that it will be apparent that as we enlarge the boundary of exact knowledge regarding the life history of the limitless number of species of micro-organisms, we will relatively extend our power to deal practically both through medicine and sanitation, with the limitation of those of a pathogenic nature inimical to man and the useful domestic animals.

TABLES APPENDED TO REPORT IN DIPHTHERIA.

TABLE I.

Showing Total Deaths from Diphtheria and Croup in 1884 in several principal Towns and Cities in each of the District Divisions of England and Wales.

District.	Name.		Population.	Diphtheria and Croup.	Deaths per 1000 of Population.
No. I.	London		4,019,361	2,037	.49
No. II. South-Eastern District.	Surrey.	Croydon	247,858	116	.46
		Kingston			
		Guilford			
	Kent.	Medway	173,249	197	1.13
		Dartford			
		Tunbridge			
	Sussex.	Hastings	206,241	72	.34
		Brighton			
		Steyning			
	Hampshire.	Portsea Island	264,828	123	.46
		Isle of Wight			
		Southampton			
	Berks.	Reading	100,686	62	.61
		Windsor			
		Newbury			
	Total		992,861		Average .60

TABLE I.—*Continued.*

District.	Name.		Population.	Diphtheria and Croup.	Deaths per 1000 of Population.
No. III. South Midland District.	Middlesex.	Brentford, Edmonton, Hendon	307,298	277	.90
	Hertford.	St. Albans, Hitchin, Watford	85,321	47	.55
	Buckingham.	Eton, Aylesbury, Buckingham	67,334	21	.31
	Oxford.	Henley, Woodstock, Banbury	65,968	13	.19
	Northampton.	Northampton, Wellingborough, Peterborough	148,364	54	.36
	Huntingdonshire.	Huntingdon, St. Ives, St. Neots	55,351	19	.34
	Bedfordshire.	Bedford, Ampthill, Luton	102.629	80	.75
	Cambridgeshire.	Cambridge, Newmarket, Wisbech	99,912	72	.72
		Total	932,177		Average .52
No. IV. Eastern District.	Essex.	West Ham, Chelmsford, Braintree	273,057	161	.58
	Suffolk.	Sudbury, Ipswich, Mutford	114,749	25	.21
	Norfolk.	Norwich, Mitford, Walsingham	140,556	98	.69
		Total	528,362		Average .49

TABLE I.—*Continued.*

District.	Name.	Population.	Diphtheria or Croup.	Deaths per 1000 of Population.
No. V. South Western District.	Wiltshire. Chippenham, Devizes, Warminster	57,709	43	.74
	Dorsetshire. Poole, Weymouth, Bridport	68,155	15	.22
	Devonshire. Newton Abbot, Plymouth, Barnstaple	194,545	36	.18
	Cornwall. St. Austell, Penzance, Redruth	132,729	18	.13
	Somersetshire. Bath, Bedminster, Exbridge	186,663	22	.11
	Total	639,801		Average .28
No. VI. West Midland District.	Gloucestershire. Cheltenham, Gloucester, Barton Regis	279,241	56	.20
	Herefordshire. Hereford, Dean, Ross, Yeominster	77,075	12	.15
	Shropshire. Wellington, Bridgenorth, Ludlow	62,764	20	.31
	Staffordshire. Stoke-upon-Trent, Wolverhampton, West Bromwich	372,562	[illegible]	.32
	Worcestershire. Stourbridge, Kings Norton, Kidderminster	216,679	39	.18
	Warwickshire. Birmingham, Aston, Coventry	521,408	137	.26
	Total	1,529,729		Average .22

TABLE I.—*Continued.*

District.	Name.		Population.	Diphtheria or Croup.	Deaths per 1000 of Population.
No. VII. North Midland District.	Leicestershire.	Leicester	181,763	47	.25
		Ashby			
		Barrow			
	Rutlandshire.	Uppingham	53,505	12	.22
		Boston			
	Lincolnshire.	Lincoln	136,573	44	.32
		Caistor			
	Nottinghamshire.	Bassford	319,091	202	.63
		Nottingham			
		Newark			
	Derbyshire.	Derby	216,206	20	.09
		Chesterfield			
		Blakewell			
	Total		907,138		Average .30
No. VIII. North-Western District.	Cheshire.	Stockport	293,413	81	.27
		Nantwich			
		Birkenhead			
	Lancashire.	Liverpool	719,001	308	.42
		West Derby			
		Rochdale			
	Total		1,012,414		Average .35
No. IX. Yorkshire District.	West Riding.	Huddersfield	530,488	78	.14
		Halifax			
		Sheffield			
	East Riding.	York	181,980	48	.26
		Hull			
		Duffield			
	North Riding.	Scarborough	156,334	24	.15
		Middlesborough			
		Whitby			
	Total		868,802		Average .27

TABLE I.—*Continued.*

District.	Name.		Population.	Diphtheria or Croup.	Deaths per 1000 of Population.
No. X. Northern District.	Durham.	Sunderland South Shields Gateshead	361,809	108	.29
	Northumberland.	Newcastle-on-Tyne Tynemouth Morpeth	312,546	73	.23
	Cumberland.	Carlisle Cockermouth Whitehaven	175,595	39	.22
	Westmoreland.	Kendall East Ward West Ward	66,886	10	.15
		Total	916,836		Average .22
No. XI. Monmouthshire and Wales District.	Monmouth.	Monmouth Bidwelty Newport	162,990	31	.19
	South Wales.	Cardiff Merthyr Tydfil Swansea	314,710	124	.39
	North Wales.	Wrexham Carnarvon Bangor	143,171	52	.36
		Total	620,871		Average .31
		Grand total of XI. Districts	12,968,352		[illegible]
		Diphtheria and Croup		5,248	
		Population of England, 1881			25,152,445
		Diphtheria and Croup			10,701

TABLE II.

Mortuary Statistics of Diphtheria in Fifty Cities of the United States, for the year ending June 1, 1880, included in the XXI. Grand Groups.

(Selected from the Census Report, 1880.)

——	Cities.	Population of each.	Total Population.	Diphtheria—Total.	Croup—Total.	Grand Total.	Deaths per 1,000 of population.
Grand Group No. I.	Boston, Mass	362,339	768,808	M. 362 F. 379 741	M. 156 F. 143 299	1,040	1.35
	Cambridge, "	39,151					
	Lawrence, "	52,669					
	Lowell, "	59,675					
	Fall River, "	48,961					
	Lynn, "	38,274					
	New Haven, Conn	62,882					
	Providence, R. I	104,857					
Grand Group No. II.	Baltimore, Md	332,313	2,593,935	M. 980 F. 1056 2036	M. 644 F. 564 1208	3,244	1.25
	Brooklyn, N. Y	566,663					
	New York City, N. Y	1,206,299					
	Camden, N. J	41,659					
	Jersey City, N. C	120,722					
	Newark, N. J	136,508					
	Washington, D. C	147,293					
	Willimington, Ill	42,478					
Grand Group No. III.	Charleston, S. C	49,984	49,984	M. 22 F. 9 31	M. 4 F. 2 6	37	.74
Grand Group No. IV.	New Orleans, La	216,090	216,090	M. 31 F. 36 67	M. 23 F. 33 56	123	.56
Grand Group No. V.	Hartford, Conn	42,015	100,306	M. 17 F. 15 32	M. 14 F. 8 22	54	.53
	Worcester, Mass	58,291					
Grand Group No. VI.	Paterson, N.J	51,031	96,881	M. 38 F. 25 63	M. 38 F. 30 68	131	1.35
	Scranton, Pa	45,850					
Grand Group No. VII.	Buffalo, N. Y	155,134	1,189,865	M. 828 F. 834 1,662	M. 397 F. 307 704	2,366	1.98
	Chicago, Ill	503,185					
	Cleveland, O	160,146					
	Detroit, Mich	116,340					
	Milwaukee, Wis	115,557					
	Rochester, N. Y	89,366					
	Toledo, O	50,137					

TABLE II.—*Continued.*

——	Cities.	Population of each.	Total Population.	Diphtheria.—Total.	Croup.—Total.	Grand Total.	Deaths per 1000 of populations.
Grand Group No. VIII.	Albany, N. Y.	90,758	1,388,916	M. 455 F. 510 965	M. 258 F. 200 458	1,423	1.02
	Alleghany City, Pa	78,682					
	Philadelphia, Pa	847,170					
	Pittsburg, "	156,389					
	Reading, "	43,778					
	Richmond, Va	63,600					
	Syracuse, N. Y.	51,792					
	Troy, "	56,747					
Grand Group No. IX.	There are no large cities in this group.						
Grand Group No. X.	Cincinnati, O	255,139	417,575	M. 110 F. 115 225	M. 49 F. 41 90	315	.75
	Dayton, O	38,678					
	Louisville, Ky	123,758					
Grand Group Nos. XI. & XII.	There are no large cities in these groups.						
Grand Group No. XIII.	Minneapolis, Minn	46,887	438,518	M. 99 F. 99 198	M. 32 F. 44 76	274	.62
	St. Louis, Mo	350,168					
	St. Paul, Minn	41,473					
Grand Group No. XIV.	There are no large cities in this group.						
Grand Group No. XV.	Columbus, O	51,647	170,053	M. 36 F. 26 62	M. 17 F. 19 36	98	.57
	Indianapolis, Ind	75,056					
	Nashville, Tenn	43,350					
Grand Group No. XVI.	No large cities in this group.						
Grand Group No. XVII.	Kansas City, Mo	55,785	55,785	M. 17 F. 8 25	M. 5 F. 9 14	67	1.20
Grand Group No. XVIII.	Denver City, Col	35,629	35,629	M. 22 F. 31 53	M. 5 F. 5 10	63	1.76
Grand Group Nos. XIX. & XX.	There are no large cities in these groups.						

TABLE II.—*Continued.*

——	Cities.	Population of each.	Total Population.	Diphtheria—Total.		Croup—Total.		Grand Total.	Deaths per 1000 of population.
Grand Group No. XXI.	Oakland, Cal.	34,555	268,514	M.	40	M.	21	115	.43
	San Francisco, Cal	233,959		F.	34	F.	20		
					74		41		
	Total	.....	7,790,859	.....		.....		.....	13.75
	Diphtheria and Croup	.....	9,330					or average	1.19

TABLE III.

Mortuary Statistics of Diphtheria taken from Reports of State Boards of Health for the following States and Years :—

State.	Year.	Population.	Deaths.	Rate per 1,000 of Population.	Remarks.
California	1884, July .. 1885, June..	864,694	401	.47	
Connecticut	1884	683,577	504	.74	Returns good.
Indiana	1884	1,978,301	424	.21	Very imperfect.
Iowa	1881	1,624,615	1,174	.72	Actual registration about 50 per cent.
Louisiana	1880	939,946	155	.16	Imperfect returns.
Michigan	From 1878 to 1882	1,636,937	No. of deaths—1,455. Total deaths—7,379	4.5 made 1 to U.S. ave. .90 per year, an average.	Tolerably complete.
Michigan	Individual years.				
	1878	.....	887	.....	Note the general increase from year to year.
	1879	.....	1,473		
	1880	.....	1,542		
	1881	.....	2,063		
	1882	.....	1,414		
Massachusetts	1881	1,867,444	2,383	1.29	Registration good.
	1882	1,921,719	1,771	.92	
	1885	1,942,141	1,523	.79	
New Hampshire	1884	346,991	159	.46	Registration good.
Rhode Island	1884	304,000	199	.65	Registration good.
Total	.....	14,110,365	10,148	.71	

TABLE IV.—Showing Deaths from Diphtheria in 1885 and 1886 in the following Cities of the United States :—

BALTIMORE.

(*Diphtheria and Croup [membranous].*)

Year.		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Totals.	Population.	Cases to 1,000 of population.	Deaths to 1,000 of population.
1885	Deaths	31	17	7	13	11	6	6	24	38	45	28	26	D. 252 C. 148	417,220	.....	.60 1.35
1886	Deaths	27	10	11	11	10	10	8	7	17	32	30	17	190	.....	.....	.45

BROOKLYN.

(*Diphtheria and Croup [membranous].*)

		First Quarter.	Second Quarter.	Third Quarter.	Fourth Quarter.				
1885	Cases	382	291	225	450	1,348	664,602	2.02	
"	Deaths	136	116	84	183	D. 519 C. 313	.....	.....	.78

ST. LOUIS.

1885	Cases	108	92	79	59	64	33	32	81	140	198	204	193	1,283	400,000	3.20	
"	Deaths	29	17	22	17	13	21	10	32	44	55	55	57	372	.....	.....	.93
1886	Cases	124	94	82	107	100	123	138	187	292	429	690	460	2,826	400,000	7.06	
"	Deaths	45	35	42	24	28	32	48	57	85	106	123	94	719	.....	.....	1.79

TABLE IV.—*Continued.*

CHICAGO.

(*Diphtheria and Croup [membranous].*)

Year.		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.	Population.	Cases to 1,000 of population.	Deaths of 1,000 of population.
1885	Cases ...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
"	Deaths..	71	54	50	62	48	36	31	45	77	81	79	72	D. 706 C. 306	630,000	.....	1.12 .48
1886	Cases ...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
"	Deaths..	78	55	52	66	70	78	56	74	60	105	139	111	D. 944 C. 429	700,000	.....	1.03 .06

NEW YORK.

1885	Cases ...	275	259	229	292	231	253	229	106	181	185	251	429	2,920	1,397,395	2.09	
"	Deaths..	108	121	121	115	102	115	101	71	87	87	122	175	1,325	.....	.....	.94
1886	Cases ...	325	305	315	260	290	268	322	193	193	294	407	575	3,747	1,439,037	2.60	
"	Deaths..	155	149	134	124	142	130	133	104	85	165	188	218	1,727	.....	.....	1.20

BROOKLYN.—Diphtheria and Croup (Membranous) for Ten Years.

——	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.
Diphtheria	812	778	544	689	1,118	1,169	632	409	385	519
Population	498,300	514,300	531,100	548,500	566,689	583,220	604,356	624,118	644,526	664,602
Deaths to 1,000 of population	1.63	1.51	1.02	1.25	1.97	2.00	1.04	.65	.59	.78
Croup	412	325	317	250	420	438	334	318	280	313
Deaths to 1,000 of population	.82	.63	.59	.45	.74	.75	.55	.50	.43	.47

CLEVELAND.

(Diphtheria, including Croup [membranous].)

1885	Deaths	21	15	14	15	9	9	12	6	11	23	21	28	184	205,000	.....	.89
"	Cases	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	422	.....	2.05	
1886	Deaths	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	229	205,973	.....	1.11
"	Cases	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	350	.....	1.70	

BOSTON.

(Diphtheria and Croup [membranous].)

1885	Deaths	51	35	24	27	23	25	23	11	18	30	35	32	D. 334	400,000	.....	.83
"	Cases	164	117	108	109	101	108	85	54	64	123	119	111	1,263 C. 125	.....	3.16	.31 C.
1886	Deaths	29	25	26	22	22	30	22	27	24	38	25	39	D. 329	400,000	.....	.28
"	Cases	122	104	110	66	73	95	75	78	85	130	111	141	1,190 C. 94	.....	2.97	.23 C.

ST. PAUL.

(Diphtheria and Croup [membranous].)

1885	Deaths	11	6	4	3	12	3	8	3	2	8	14	14	D. 88 C. 44	111,394	.....	.79 .39 C.

DETROIT.

(Diphtheria and Croup [membranous].)

1885	Deaths	46	22	21	20	20	11	4	15	24	29	20	36	D. 268 C. 56	165,000	.....	1.62 .33 C.

CINCINNATI.

(Diphtheria and Croup [membranous].)

1885	Deaths	17	3	5	7	6	3	7	8	7	15	9	13	D. 100	325,000	.....	.30
"	Cases	22	6	10	9	10	9	8	16	25	20	26	17	178 C. 114	.....	.54	.35 C.
1886	Deaths	13	12	4	7	10	10	18	12	23	27	42	17	D. 195 C. 169	.....	.....	.60 .51 C.

TABLE V.

Mortuary Statistics of Diphtheria by Counties in Ontario for the Five Years of 1882, 1883, 1884, 1885, and till June of 1886.

Counties.	Population.	Year 1882.	Rate per 1,000 of Population.	Year 1883.	Rate per 1,000 of Population.	Year 1884.	Rate per 1,000 of Population.	Year 1885.	Rate per 1,000 of Population.	Half-year June, 1886.	Rate per 1,000 of Population.
Brant	33,869	16	.47	29	.85	15	.44	9	.20	14	.40
Bruce	64,774	26	.40	13	.20	4	.06	3	.04	1	.01
Carleton	64,103	88	1.39	46	.72	13	.20	44	.70	25	.40
Dufferin	20,536	6	.29	1	.05	4	.20	1	.04	10	.40
Elgin	42,361	29	.68	5	.11	5	.11	15	.30	11	.20
Essex	46,559	47	1.00	31	.66	71	1.51	94	2.00	50	1.07
Frontenac	42,555	20	.47	5	.12	14	.34	13	.30	8	.18
Grey	70,528	25	.35	13	.18	15	.20	0	.00	6	.08
Haldimand	24,991	9	.36	6	.24	1	.04	8	.30	1	.04
Halton	21,919	8	.36	7	.31	7	.31	3	.10	11	.50
Hastings	55,192	34	.61	16	.28	20	.35	37	.60	6	.10
Huron	76,525	25	.32	33	.40	10	.12	4	.05	9	.10
Kent	54,335	33	.60	8	.15	15	.28	29	.50	19	.30
Lambton	52,034	18	.34	11	.21	8	.15	18	.30	23	.40
Lanark	33,975	10	.29	20	.58	30	.87	8	.20	3	.09
Leeds and Grenville	60,164	79	1.31	68	1.12	66	1.08	59	1.00	15	.20
Lennox and Addington	26,484	18	.68	8	.30	9	.34	7	.20	0	.00
Lincoln	31,563	19	.60	9	.28	6	.19	6	.20	3	.09
Middlesex	93,081	47	.50	8	.08	13	.13	24	.20	10	.10
Norfolk	33,527	22	.65	7	.21	0	.00	6	.10	5	.10
North'mb'rland & Durham	77,390	48	.62	7	.09	20	.26	12	.10	3	.04
Ontario	48,812	25	.51	21	.43	21	.43	11	.20	0	.00
Oxford	50,159	41	.81	34	.67	8	.16	24	.40	3	.05
Peel	26,175	15	.57	17	.64	11	.41	8	.20	6	.20
Perth	53,686	34	.63	11	.20	3	.06	9	.20	4	.07
Peterboro'	34,648	16	.46	15	.43	8	.23	7	.20	6	.10
Prescott and Russell	38,022	27	.71	26	.68	18	.47	134	3.05	87	2.30
Prince Edward	21,045	48	2.28	3	.14	4	.18	6	.30	2	.10
Renfrew	40,246	28	.69	22	.54	21	.51	23	.50	11	.20
Simcoe	74,903	33	.44	20	.27	28	.37	51	.70	24	.30
Stormont, Dundas and Glengarry	66,017	50	.75	14	.21	17	.25	49	.70	30	.40
Victoria	35,163	27	.76	6	.17	30	.85	16	.40	6	.10
Waterloo	42,735	47	1.09	14	.32	5	.11	4	.09	0	.00
Welland o	31,771	19	.59	7	.22	9	.28	10	.30	11	.30
Wellingt n	66,189	37	.56	22	.33	12	.18	22	.30	14	.20
Wentworth	66,952	29	.43	26	.38	63	.92	89	1.30	68	1.01
York	153,098	117	.76	85	.55	54	.35	106	.60	125	.80
Totals	1,923,610	1,220	.63	694	.35	668	.33	1,969	.45	1,630	.32
Total Deaths from Croup		469	.24	367	.19	261	.13	276	.14	*Relative increase in 1886.*	

APPENDICES.

THE CHAIRMAN'S ANNUAL ADDRESS.

To the Members of the Provincial Board:

GENTLEMEN.—Four years last March having elapsed since the formation by the Ontario Government of a Provincial Board of Health, it may fairly be considered in order to make a brief enquiry in the annual address from the Chair into the degree of accomplishment of the objects set forth in the Health Act of 1882 as the special work to be undertaken, and, if not in every particular attained, to briefly advert to the difficulties the Board has experienced in procuring a full accomplishment. The duties of the Board, as set forth in section 3, read as follows: "To take cognizance of the interests of health and life of the people of the province; to study the vital statistics and make an intelligent and profitable use of the collected records of deaths and of sickness among the people; to make sanitary investigations and enquires respecting causes of disease, especially of epidemics, causes of mortality, and effects of localities, employment conditions, habits and other circumstances on the health of the people; to make such suggestions regarding the prevention and introduction of contagious and infectious disease as they shall deem most effective and proper, and as will prevent and limit, as far as possible, the rise and spread of disease, and when required, or when they deem it best, advise officers of the Government and Local Boards of Health in regard to the public health, and as to the means to be adopted to secure the same, as to location, drainage, water supply, disposal of excreta, heating and ventilation of public institutions." Such, then, were the duties assigned us in 1882, varied in some particulars in the Acts of 1884 and 1885, but in all essentials remaining still our *raison d'etre*. Under the Act of 1882, the functions of the Board were confined to the issue of sanitary literature, relating to the prevention and spread of contagious diseases, by pamphlets, circulars and the public press, advising Municipal Councils to establish Local Boards of Health, investigation into special causes of epidemic or endemic diseases and of mortality—suggesting to every municipality the advisability of establishing isolation hospitals, for the reception of persons suffering from contagious disease, subject to the regulations made by Health Officers of Local Boards—executive power only being given to the Provincial Board, on a proclamation to that effect issued by the Lieut-Governor in Council. The Health Act, then, under which the Provincial Board first commenced its work, was purely permissive; the extent and nature of it has been in previous reports fully described, therefore unnecessary now to be alluded to. That the administration and satisfactory carrying out of all the details of preventive medicine on merely advisory powers in serious outbreaks of epidemics is absolutely futile, was sufficiently demonstrated in the epidemic of Small-pox last year in the Province of Quebec, and but for the wise and prompt action of the Ontario Government in clothing the Medical Inspectors appointed by the Board to guard the frontiers of Ontario with additional executive Powers, our Province, unquestionably, would have suffered from a very serious visitation of the disease. In such emergencies the working of separate authorities almost of a necessity involves divided councils and delay, when compulsory notification, promptitude and vigour of action is imperatively required for practical sanitation. Acting under the power the Provincial Board was first invested with, and to which in a great measure it is still confined, it has been its endeavour by the diffusion of sanitary literature, holding of conventions and establishing Local Boards in almost every municipality of the province, to secure the carrying out of the various provisions of the Health Acts of 1882, 1884, and supplementary Act of 1885, and with, we have reason for believing, a good measure of success; but that much yet remains to be accomplished in the way of sanitary administration, we

cannot fail to admit. The purity, from disposal of sewage, of water supply in cities, and in towns and villages, where the ground water-level is within ten or fifteeen feet of surface, in sandy or gravel soils, with privies in dangerous proximity, is yet open to question. Faulty sites of houses, imperfect connection of house-drains, with sewers, cheap, therefore dangerous plumbing, insufficient ventilation of buildings, public and private, still give occasion for animadversion. In large cities in England and in the United States for many years, by-laws have been formulated and acted on that in a very great measure suffice for securing healthy homes. They have reference to interdicting building on sites which have been previously used as a place for depositing garbage, or any offensive material, which may have rendered such site liable to cause buildings erected thereon unhealthy, until such material shall have been removed to the satisfaction of the corporation; the civic authorities providing regulations for the construction of the house drains, cellar, waste water and closet, connexion with street sewer and precautions against admission of sewer gas into the dwelling, by proper means against the unsealing of traps; registering in the city hall a plan of the plumbing, position of drains and connexion with stre t sewer, the same provided with an exterior shaft communicating with outer air above the eaves-spout, and at a distance from any dormer window. Previous to renting or selling any new building, notice should be given to the corporation of its completion, and only after examination and certificate from the city surveyor that every sanitary precaution enjoined by the city authorities has been complied with, should it be free for habitation. Recommendations of this kind, for the protection of the public against dangers to health from faulty construction, have been carried at our board meetings. The passing of the requisite by-laws for enforcement is vested only in the Local Board. If, therefore, no measures exist of protection loudly called for, particularly in the class of brick-veneered houses springing up in every direction, where the plumbing expenses are limited to a sum utterly inadequate for securing safety, the fault does not rest with the Provincial Board; and it is manifest that much remains yet to be done for the accomplishment of the purpose for which our Board was created. The question of sanitation should be reviewed as an all-round question, embracing the entire Dominion. Fevers and infectious diseases are no respecters of persons, the rich equally with the poor being the victims. Human life should not be weighed against cost. In the report of Royal Sanitary Commission, Dublin, 1879, it is stated that out of more than one thousand dwelling-houses inspected in Ireland, from noblemen's manssions to six-roomed houses, only twenty could be truthfully certified free from danger to the health of the residents; 480 houses so ill-arranged and constructed that foul gases had free entrance into the dwelling; 416 drains leaking sewage into basement sub-soil; 397 drains with defective functions; 238 drains devoid of arrangements for ventilation; many soil pipes with unluted joints passing through pantries or larders, polluting milk, butter, meat, etc.; pipe drains broken, or with leaking joints saturating sub-soil with sewage; drains under dwellings without sufficient fall; drains without proper intercepting traps, or without free current of air throughout; defective or ill-constructed water-closet apparatus. I quote these few out of a list of fifty-one specific insanitary and dangerous defects, discovered during sanitary inspection of dwelling-houses, in proof of of the necessity for city councils in our Province to have in their employ a surveyor or sanitary inspector of buildings, on whose certificate of completeness the purchaser or tenant may enter into residence without fear of consequences. Unfortunately the public are not easily convinced of the necessity of all these precautions, when money has to be spent in order to avoid them, and are apt to view persons dilating on them as busy-bodies and alarmists: but as the members of the Provincial Board are medical practitioners, and the treatment of cases of typhoid, diphtheria and other preventible diseases, which, to a great extent, by the precautions they enjoin, might be avoided, and by the neglect of them cause a large addition to their incomes, they must have at least the credit accorded of firm belief in the opinions they express, as also of disinterestedness. The prime movers in the cause of preventive medicine are to be found in the medical profession, prominent among them. Dr. B. W. Richardson, Sir James Paget, and a host of others on the continent of Europe, Great Britain and America. To their labours and the most important co-operation of eminent sanitary engineers, the measure of success accomplished is to be attributed.

It has been shown by Mr. Edwin Chadwick, the father of modern sanitary science, that within the last twenty years there has been a great reduction of sickness on the entire population. In the army and navy the saving is from seventeen in each 1,000 to eight and a-half; in India from sixty-nine per 1,000 to twenty. This diminished death-rate has been from all ranks of life, from the Queen's household to the inhabitants of the poorest tenement. It is needless to remark that with a diminished sickness and death-rate, there is involved immense money-saving. Sir Robert Rawlinson, in an inaugural address at the congress at Dublin, 1884, of the Sanitary Institute of Great Britain, in speaking of the reduction of disease by sanitary work and regulations says: "In looking over the advances made in sanitary science it must never be forgotten that to undertake and perfect good works is one thing, but that to maintain them good is the main thing. It must be remembered that sewers, drains and waterworks are only means to an end; they are only good so long as they are sound, clean, and cared for. Again, the most complete works of sewering and water supply may leave untouched the slums, lodging houses and room tenements, and these places may remain nests of contagious disease, out of which will continue to stalk the grim forms of typhoid, smallpox, diphtheria and cholera. There are towns in England where sewers and drains have been formed and a good water supply established, but whose scavenging and house inspection and cleansing, have been shamefully neglected. The first should be done, the latter not left undone." These remarks of Sir Robert Rawlinson sufficiently indicate the necessity for every Local Board having a staff of inspectors, proportionate to the population of the city or town, engaged in the work of reporting to the council every departure from sanitary requirements. The abundant water supply in Toronto and other cities of this Province, has naturally induced house owners and builders to add very largely to the number of water-closets; it is, therefore, a matter of supreme importance that the Local Boards of Health should vigilantly attend to the system of connection of the house drains with the sewers, otherwise the result of attempted removal of excreta must lead to sewage saturation of basement subsoil, and mortality from typhoid and other preventible diseases result therefrom. It is too much the custom to attribute such results to the *malfeasance* of the plumber: that such charges are occasionally well founded does not admit of dispute, but in justice it must be remembered that there are many firms in this and other cities of our Province who honestly perform their work, and who would indignantly refuse the great responsibility attaching to it, when the maximum sum named would be utterly inadequate for securing safety. The fact, however, remains that numerous instances have occurred of sickness and death resulting from wilful or careless performance of this vitally important work, and the necessity for legislation on this subject was apparent to this Board for the protection alike of the honest tradesman and general public. In conjunction with a Committee of the Sanitary Association of this city, composed of sanitary engineers, architects, builders and plumbers, the members of the Provincial Board prepared a draft of a bill of "rules and regulations to be observed in the construction of houses and buildings, and of the drains, soil pipes, and plumbing of the said houses, or other buildings within the municipality—requiring a registration of plumbers; examinations for inspectors of plumbing by a board nominated by the local officer of health, but submitted for approval to the Provincial Board; clauses in the amendment to Public Health Act having reference to the filing of a plan in the office of the medical health officer, showing the whole drainage system, from its connection with the common sewer or cesspool to its termination in the house, together with a specification and sizes of all boundary traps, ventilating pipes and fixtures; no cast-iron pipe of four inches internal diameter to weigh less than forty pounds per length of five feet, and no cast iron pipe of two inches internal diameter to weigh less than twenty pounds per length of five feet; regulations also for weight of lead pipes. Also to be read in connection with section 16, Schedule A, Public Health Act Regulations, for sites of houses on made soil; each house or building having a separate soil pipe and drain passing through and out of it; protest against use of pan closet, method of making connexion between lead and iron pipes, in connection with sections 4, 5, 6, 7, Schedule A, Health Act, 1884, granting power, under instruction of medical health officer, to inspectors to visit cow byres, dairies, etc.

The provisions of this Bill, if they had met with the approval of the Assembly, would have proved the means of a rapid advance in sanitation, but it would appear that in their judgment the people were not prepared for compulsory enactments, even on matters directly concerned with life and health, and the only result of this attempt at further sanitary legislation was an addition to the Consolidated Municipal Act, providing that councils of any city or town may pass by-laws for licensing and regulating plumbers.

The experience derived from the recent severe and long-continued epidemic of smallpox in the Province of Quebec, so unmistakably pointed out that vaccination and re-vaccination must be always and immediately available free of charge, not only to patients on first seizure, but to all persons liable to be affected from residing in the locality where this disease had broken out, and for securing the arrest of this loathsome disease, prompt isolation being also had regard to, that at the request of the Provincial Board Dr. Bryce undertook the task of preparing an Act to amend the existing Vaccination Act, having special reference to insuring the vaccination of all school children. The details of this Amendment Act submitted to the legislature, will be given in the report of the Committee on Legislation; it is needless, therefore, for me to make any further remarks beyond regretting that this also was left to the discretion of municipal councils.

Dr. Buchanan, the President of the Local Government Board of England, has, if I am correctly informed, admitted that the actual working under separate authorities necessitated the delay of a week before three cases of smallpox could be securely isolated, even when those cases occurred at the "Home" of the Princess Louise. Dr. Cameron, a member of the House, essayed for Preventive Medicine to be enforced under existing Acts with vigour and without attendant delay. He pointed out that in Glasgow, where it is not claimed that all the arrangements and details are carried out in perfection, the annual death rates from Smallpox have been reduced to nine per million, while in London they amount to no less than 226 per million. It was shown, before the unity of sanitary action was enforced in Glasgow, that the death rate from Smallpox was even higher than it was in the Metropolis; and statistics, the accuracy of which is not impugned, were given, which proved that just as practical sanitation for the prevention of Smallpox was more and more strictly enforced, so was the death-rate from that disease reduced, until the very results now recorded were attained. As I remarked at the commencement of this report, the work assigned us by the Ontario Government is yet incomplete; there is undoubted evidence of a greater amount of interest taken in the causes and prevention of disease, and if members of the House of Assembly would only take out of the range of politics measures called for by sanitarians to be judged only upon their merits, and if Municipal Councils would entertain less alarm on questions of cost, far more advanced legislation than is now existing would strengthen the hands of Provincial and Local Boards of Health, and the judicious expenditure of money by local authorities would bear fruit. Dr. Alfred Carpenter, at the 7th Congress of the Sanitary Institute of Great Britain, held at Dublin, 1884, read a paper on "Education in Sanitary work," from which I extract the following passage: "The working-men in Dublin are a power; here they can elect a majority of the representatives of the Council. Do they know what is meant by a death-rate? The town I reside in (Croydon) used to have a death rate of 26 in 1,000; it is now 16. That is, the lives of 10 persons out of every 1,000 are preserved to their relatives, who would, but for sanitary expenditure by the local authorities, and by private persons, be numbered with the majority every year. Let us suppose that the death-rate of Dublin were reduced from 28 to 16, it would mean that the funerals in the course of the year would be diminished by more than 3,000, a serious matter for the undertakers, still a trifle worth preventing. But it would also mean much more than this: for every death there are twenty cases of sickness, and if there are 3,000 fewer deaths, there would also be 60,000 fewer cases of sickness among the people every year. Let me ask members of benefit societies whether they can realize this fact; whether they can understand that for every death prevented, there are twenty cases of sickness also prevented. Let us suppose that 20,000 of the working-men belong to benefit societies. They have to pay in weekly or monthly payments sufficient to provide for a sick fund, the greater the sickness the more they have to provide for it. If sickness is permanently reduced, they will be able to permanently reduce their payments on this account." Dr. Carpenter, in this, his address,

dilates at great length on the varied benefits to be acquired by the enforcement of sanitary laws by municipal government; but the reasonable limit of an annual address from the Chair must preclude further extracts. I will, therefore, only briefly allude, in conclusion, to action taken some weeks back, at a special meeting of the Board called for the purpose of expressing an opinion on the present site of the cattle market in this city. The location in question, for a number of years past was not open to serious objection, as there was only a comparatively sparse population surrounding it; but of late years the growth of the city has principally tended westward, large manufactories have been established, around which very numerous new streets are to be found, the houses therein occupied by the artisans employed. From the employers and the employed, the Board have received numerously signed petitions requesting the Provincial Board to express an opinion on the proposed outlay of a large sum of money on the present cattle market, which they object to as depreciating the value of surrounding property at the present, and which, with the enlarged accommodations suggested for cattle, pigs and sheep, might prove a serious nuisance. Acting under section 3 of the Act for 1882, at this special meeting, our Board requested Dr. Bryce to communicate to the city council the opinions entertained by the Provincial Board on this question. The views, as set forth in his letter, will be submitted at this quarterly meeting for further discussion. There can, I apprehend, be no difference of opinion entertained by any member of the Board that the assumption, on which action was taken at this special meeting, of a very great increase in the cattle trade, consequent on the railway connections of this city with the Canada Pacific, was not a groundless one,—if so, it is certainly desirable that a cattle market, in a city whose rapid increase within the last five years warrants the belief that before very long its population may be stated at 200,000, should be placed in such a locality that would combine with ease of access, freedom from danger to the health of the inhabitants, and also favourable for the establishment of an abattoir which, before many years have elapsed, will have become a necessity. The City Medical Health Officer recently reported that the total number of butcher shops in the city was 143, of which 105, at the time of inspection, were found to be in a satisfactory condition. No mention was made as to whether on any occasion did slaughtering take place on the premises. Of slaughtering-houses, the report records 25, only five of which were reported as in a satisfactory sanitary condition. The By Law requires that these premises should not be less than 200 yards from any dwelling, and not less than 70 yards from any public street. They were found to be from six to 300 yards from dwellings. In a conversation, recently, with Dr. Canniff, I learned that the blood found its way into the drains, was thrown on the ground, or leaked through the floors into the soil beneath. We may, perhaps without injustice, assume that only in warm weather are deodorants, and still less frequently, if ever, germicides employed; if the soil on which these slaughter-houses are placed happens to be porous, and in a thickly populated district, retaining this form of organic matter, which rapidly decomposes and emits offensive emanations, they would at all times be dangerous, but more particularly so when the ground water is rising, and driving upwards the gases contained in the interstices of its material. The almost general disuse of the wells, so wisely insisted on by the Local Board of Health, would probably cause a more exchange of danger, the balance of noxiousness, however, although less apparent to the senses, is in favour of the clear, cold, sparkling, but nevertheless rightly condemned, well-water. Many other arguments, aside from the pollution of our sewers and soil from blood, might be adduced. Time will permit only of a brief allusion to one industry incident to an abattoir. I quote from a paper by Mr. W. G. Stryper, C. E., entitled a new process for treating and drying blood, so as to fit it for use as a manure without nuisance. The rapid manner in which the blood of animals decomposes, exhaling emanations dangerous to health, has presented considerable difficulty in preparing it for use. Blood contains about 75 to 80 per cent. of moisture, which has to be evaporated in order to prepare it in a convenient form for agricultural or other purposes. But the operation of drying, as usually performed, tends to aggravate the nuisance by the increased emission of noxious vapours. It has been generally known that the ordinary hydrated sulphate of alumina has the property of abating the nuisance arising from the decomposition of

blood, but the quantity necessary to do so is considerable, as it is almost impossible to thoroughly mix the dry sulphate with the blood so as to secure deodorization. Hydrated sulphate of alumina, however, as now manufactured, is very soluble in water especially in hot water, and I found that if the sulphate were previously dissolved in water all the difficulty would be overcome, as the solution so obtained could be added to the blood so as to be intimately incorporated with every particle of it. I found that so small a proportion of the hydrated sulphate of alumina, as the one-fiftieth or sixtieth part, when added in the form of a solution, was quite sufficient to entirely destroy the offensive odour, and the resulting mixture of blood and sulphate of ammonia could be afterwards dried for manure. This process is now successfully carried on at the Dublin and Wicklow Manure Co., as also on a very large scale at the Saladeros, or slaughtering establishment, at Monte Video, in the state of Uraguay. This manure, of the highest value for agricultural purposes, is sold at from six to seven pounds sterling per ton." Apologizing for having, you may consider, too long detained you from the work each quarterly meeting brings with it, I conclude with the hope that our labours, and the labours of Local Boards will conduce to the general acceptance of the Roman saying, "*Salus populi, suprema lex*"; that at elections, whether for seats in Municipal councils or the Legislature, the electors will enquire of the candidates whether they will work for a proper supply of pure water, for the proper guarding against the erection of houses that from faulty plumbing may be viewed as death traps, for the proper care that waste and refuse matter be removed from our midst before it has time to be the occasion of sickness, that our bays, rivers and streams shall no longer be great sewers, and that the atmosphere of public buildings, dwellings, and school-houses, should not contain more than 0.6, or at the outside 0.8, of carbonic acid per 1,000 parts, by due regard being had to proper ventilation.

HEALTH NOTES OF A RECENT TRIP IN GREAT BRITAIN.

BY THE CHAIRMAN.

To the Members of the Provincial Board of Health:

Gentlemen,—You are aware that letters received by our Board early in the spring led us to entertain the hope that we should have added to the meeting of the A. P. H. A. this month, in Toronto, a good representation of members of the Sanitary Institute of Great Britain, as also of the Association of Medical Officers of Health and other kindred associations in the Old Country, and thus the said association would have attained a greater International character.

I am sorry to have to record that with the exception of the very able and well-known officer of health of the city of Glasgow, Dr. Russell, no sanitary representative from Great Britain was present at our convention. Had the period fixed for it been earlier in the year, I think a different result would have been attained, but it appeared very evident that a return passage late in October or November, was not devoid of terror to many who had experienced the sea sickness incidental to the short passage from Dover to Calais or from Liverpool to Dublin.

A short description of an institution in London for rapid and secure conveyance of infected sick to a line of hospital ships in the river Thames, near Purfleet, will, I think, be of interest to the members of our Boards, inasmuch as our great rivers might similarly be utilized, as locations for isolation hospitals, such locations conveying less terror of infection to the public mind than land sites. The particulars I gathered during a visit of inspection, made in company with a large number of English officers

of health and colonial representatives, to the river ambulance stations, situated at south wharf, Rotherhithe, north wharf, Blackwall, and west wharf, Fulham. From these wharves sufferers from smallpox are conveyed to the hospital ships at Long Reach, Purfleet. Every ambulance station contains coach-house, stables, kitchen, dormitories, disinfecting rooms and other offices adapted to the wants of the resident staff. At these several wharves, completely isolated, are always on hand a number of admirably equipped ambulances for different varieties of infectious diseases; within fifty seconds of receipt of a telephone message to the nearest wharf of a case of infectious disease for removal to hospital ships, an ambulance is dispatched to the number of street or hospital in which the patient is to be found, with a nurse seated in the far corner provided with every requisite for comfort of patient *in transitu*, ambulance stretcher on rollers, thus admitting on arrival at the house of rapid removal and of conveyance to the chamber of patient, who, placed in the vehicle, is quickly conveyed to the wharf nearest to residence. The three ambulance steamers, *Red Cross*, *Maltese Cross* and *Albert Victor* are employed for conveying the sick to the hospital ships at Long Reach, Purfleet. The *Red Cross* is 105 feet in length, with a beam of sixteen feet six inches, drawing four feet six inches; can carry sixteen patients lying down and 150 sitting speed, ten knots. *Maltese Cross*, on which we took passage, is 132 feet long and sixteen feet six inches broad, depth, seven feet six inches; can carry thirty six patients lying down and 200 sitting speed, ten knots; *Albert Victor*, nearly the same dimensions as *Maltese Cross*. The patients who are too weak to walk are lifted in the stretcher from ambulance waggon and carried direct on board, to either the forward or stern hospital on board steamer; a doctor and nurse can be found in each to accompany the patients on passage down river until arrival at Purfleet, where in line are to be found the three hospital ships, *Atlas*, *Endymion*, and *Castalia*, moored in line one behind another in the order named. The *Atlas* is a large three decker man-of war, purchased from the Government, we were informed, for little more than the value of timber, 284 feet long, fifty feet broad. A large hatchway twenty four feet by eleven feet six inches has been cut through the upper and lower decks in the centre of the ship, and forms a most efficient ventilating shaft for the egress of the impure air from the wards, while the fresh air is introduced through a long series of windows, replacing the ports. Patients distributed in these long wards, accommodating in all 150, but on emergency 200, could be treated on board. The *Castalia* is a twin ship, bound together like Siamese twins, built at the same time as the *Douvres et Calais*, with the expectation that sea sickness would be avoided, but proving unsuccessful as a channel boat was bought by the Metropolitan Asylum Board. On the upper deck five detached huts or hospitals are to be found, the two end ones fifty feet by twenty eight feet, the remaining three fifty-four feet by twenty feet; lower deck of ship divided by iron bulkheads into five wards, two end ones semi-circular, with a radius of thirty feet, the remaining three rectangular, sixty feet by thirty feet, the windows so placed that cross ventilation is secured. The ventilation on the lower deck is further secured by two large apertures made in the roof of each hut, funnels carried up surmounted by large Boyle's exhaust cowls. These draw up the vitiated air, while the fresh air is introduced by means of apertures near the floor, fitted with a series of hot water pipes, around which are revolving fans, thus warming it before entering the ward. *Endymion* is a steam frigate, lent by the Admiralty, 277 feet long by forty two feet broad, moored between the *Atlas* and *Castalia*, connected with each of these ships fore and aft by covered gangways. This vessel is used as an administrative ship, on which the staff, nurses and employés live when off duty, and here the cooking and other administration work is carried on. Warming of all three ships is effected by hot water pipes.

On the quarantine grounds, near which the ships are moored, are situated lavatories, amusement room for nurses, and bath rooms, said nurses allowed only at long intervals to leave the quarantine ground on a visit to relations and friends. Before doing so they have to go through the following ordeal:—Entering the first of a series of three rooms they there remove every article of clothing, and enter *paris naturalibus* into the second or bath room; in the bath with flesh brushes and carbolic soap, they are enjoined not only to remove possible infectious germs from the surface of the body, but to

thoroughly wash the hair; this accomplished they enter the third room, where a complete set of clothes is to be found free from all suspicion of infection. Thus dressed they pass through a passage—having no communication with other nurses—to the shore, where the boat is awaiting them for conveyance to the nearest railway point for London.

On the large space of quarantine ground is to be found, in addition to the buildings for nurses, large buildings for heating by steam, and lighting by electric light the three ships described; also mortuary, post mortem examination and other buildings. In addition to these provisions for reception of infectious disease cases, with the sanction of the Commissioner of the Local Government Board, another very large hospital at Darenth, on the opposite side of the river, was contemplated by the Metropolitan Asylum Board at a cost of forty thousand pounds, but the new Commissioner under Lord Salisbury's government has negatived for the present the proposal as too costly and unnecessary. Since 1884, when patients were for the first time taken by the steamer *Red Cross* to the hospital ship, and since that time by the *Madus*, *Albert Victor* attached on service, to the close of 1885, no fewer than 11,600 patients were removed to Long Reach, the mooring ground of said ships, and 10,076 recovered patients were brought back to the London wharves. During the years 1884-5 there were 32,195 removals of fever and smallpox patients effected by the ambulances attached to those stations. The greatest number of patients conveyed down the river in one day was 104 by the *Red Cross*.

On the day I, in common with other colonial representatives and some forty English Medical Health Officers, was invited to make the inspection I have very briefly detailed, arrangements were made to entertain us right royally, dinner speeches following.

Among several medical *confreres* from different States of the Union, passengers with me on board the ship *Egypt* of the National Line on returning home, I had the great pleasure of forming the friendship of Dr. Shakespeare, one of the Professors of the Pennsylvania University, who had been absent from Philadelphia a year on a mission from the National Government for investigation into the etiology of cholera as it appeared in Spain, Italy, and India, and in frequent conversations during our voyage, Dr. Shakespeare most kindly communicated to me the material for a few notes hastily taken at the time, giving me permission to communicate the same to the members of the A. P. H. A., convened this year in the city of Toronto.

In the first place, I learnt from him that cholera had not prevailed in districts where it was most expected in Spain to the extent it was deemed probable; on the other hand, in Italy, where it was considered likely there would be freedom from it, it prevailed, but not to such an extent as newspaper reports gave reason for crediting. For example, since March there have been no cases in Spain, while in Italy it has continued to the present time. In every case of cholera under Dr. Shakespeare's notice, the bacillus supposed to be causative was present in the *dejecta*, but in his opinion it has yet to be determined whether the bacillus is unquestionably to be viewed as causative or only concomitant. The universal presence of this bacillus, and its absence in all other diseases is absolute in Cholera Asiatica. The absence of it would indicate the approximate symptoms as belonging to Cholera Nostras, not Asiatic. The detection in the *dejecta* of this specific bacillus, comma bacillus of Koch, is sufficient in his opinion to unquestionably determine the nature of the disease, and on that discovery immediate action should be taken against the spread of it, Dr. Klein's opinion to the contrary notwithstanding.

Dr. Roy considered this comma bacillus a concomitant—viewed it as a vegetable organism, failed to find them in the cases under his notice in Italy, but found them in the cases in Spain. Dr. D. Douglas Cunningham accepts Dr. Koch's views that the comma bacillus is always to be found in Asiatic Cholera, and not to be found in health or other diseases, but hesitates to admit that it is the cause of cholera, notwithstanding they are always present, and that they prove equal to killing guinea pigs, exhibiting all the symptoms of Cholera Asiatica, only sometimes without the presence of diarrhœa. Dr. Shakespeare also informed me that he considered Dr. Brouardel's wholesale condemnation of Dr. Ferran's claimed efficacy of his attenuations in preventing the disease, of his strictures on Dr. Ferran's imperfect methods and laboratory appliances, as also of his arrival at the conclusion that he was endeavouring to obtain from his

government a large reward for his work, somewhat precipitate. He stated that he had visited his laboratory, and that although it was true that it wanted the appliances to be found elsewhere on the continent, in Great Britain and in America, and that it was neither large nor scrupulously clean, yet, notwithstanding, on his visit and examination of his processes for separating the particular germ from all others, and for care in mounting and staining, he found nothing to object to. Dr. Shakespeare considers that Dr. Ferran's conversation with Brouardel on the subject of money was in some measure misapprehended by that gentleman that Dr. Ferran was poor and in the talk of money grant, reference was had more to increased means for prosecuting his researches. With regard to Dr. J. M. Cunningham's *ex-cathedra* opinions of the non-contagiousness of cholera, Dr. Shakespeare inclines to the belief, from what he heard while resident in India, that Dr. Cunningham's opinions have undergone a change, although as yet no direct avowal of the same has appeared.

All of which is respectfully submitted,

CHAS. W. COVERNTON, M. D.,
Chairman Ontario Board of Health.

REPORT *RE* INSPECTION OF DR. STEWART'S VACCINE FARM, PALMERSTON.

To the Chairman and Members of the Provincial Board of Health:

According to instructions received from the Minister of the Department, through the Chairman of the Board, I proceeded on the 12th May, via Mount Forest, to Palmerston, to visit the Vaccine Farm, in company with Dr. Yeomans.

We found that the stables, which belong to Dr. Clark's brewery, not now used for brewery cattle, have been utilized by Dr. Stewart, and that as regards cleanliness, ventilation and space, they would appear to fulfil, in a marked degree, the conditions of cleanliness necessary to the success of such a farm.

Dr. Stewart had, at the time of our visit, but one calf vaccinated, and this one had only a few incisions on the posterior parts of both thighs, just enough to supply new lymph for a few points, and to propagate fresh seed. The animal was a grade Durham heifer of six or eight months old, and had every appearance of being in good health.

Dr. Stewart has, convenient to the stalls, a room in which the animal may be vaccinated and a frame on which the calf is placed when the lymph is to be taken. He proposes a more convenient table, on which the animal may be more readily placed.

Dr. Stewart finds that the vaccine vesicle matures within five or six days from the date of inoculation, and that the lymph, to be obtained clear and in amount, must be taken on usually the 5th day. This is, I find, the date, with the exception of Brussels, Belgium, where it is taken on the 6th day, on which the lymph is taken either for direct inoculation of another calf, or for storing, as given by Mr. Shirley F. Murphy, of the National Vaccine Establishment of Great Britain, for seven places, including London, which he visited, *i. e.*, Rotterdam, Utrecht, Hague, Amsterdam, Harlem, Brussels, London.

From the length of time in which bovine and arm to arm vaccine takes to mature, I had supposed that the bovine usually took seven or eight days to mature. I have not any positive evidence as to the time of maturation of the vesicle in United States establishments.

Vegetable ivory points are used by Dr. Stewart. When taken, he stands them base downwards in a groove in a stick padded with chamois; when thus treated, they are

taken to the office, allowed to stand there at the ordinary temperature of the room, and afterwards placed away in glass-stoppered jars, in a room kept cool by ice. When ordered they are packed in gutta percha film, and so sent away.

Such, as far as I was able to learn, are the chief points in Dr. Stewart's work, and with some variations, are those practised by most of the establishments supplying vaccine on this continent. Minutiæ, and details of work of private farms, in a greater degree than here stated, seem difficult to get, *i. e.*, if they differ from the above; while from the successive references to the National Bovine Vaccine Establishments of Great Britain and the continent, published in the blue-books, but little can be learned, since it would seem that in London, etc., the calf-inoculations are principally used to renew, from time to time, lymph which may have been too frequently humanized, by this means tending to maintain the arm-to-arm vaccination in a state approaching true bovine vaccination.

Thus the total amount sent out from the Animal Vaccine Station of the Local Government Board in 1883 and 1884, was:

	1883.	1884.
Charged Ivory Points	9,249	13,139
Tubes (capillary)	2,151	114
Number of applications to Establishment for Vaccine	1,666	1,770

As at the most the number of points, per application for vaccine, did not exceed ten, it is plain that the experience in bovine lymph of general practitioners in England is very small; while from the fact that two calves are inoculated weekly in the National Establishment in London, it is quite evident that an order for ten could, at any time, be at once filled, with almost perfectly fresh lymph, and by ready and rapid transit, and the systematic work done under the public Vaccination Act, can be in the small amounts ordered, always used when nearly fresh. Dr. Cory has stated that with perfectly fresh bovine lymph, 990 primary vaccinations in 1,000 have been successful. Again, with perfectly fresh lymph, human or animal, 99 per cent. of primaries have been successful at the various National Vaccine Stations. This rate is never obtained when stored lymph has been used. It is stated in the Report of the British Army Medical Department, 1882, that of 641 attempts at vaccination of recruits never before vaccinated that 166, or 26 per cent., failed altogether, and another 219, or 34 per cent., had modified vaccine pustules only. Thus 40 per cent. only of primary vaccinations were thoroughly successful with stored lymph. Returns already presented to the Board have shown how varying have been results in Ontario; but they, even though much vaccination was done in fairly cool autumn weather, and with an unusual demand, owing to the Montreal epidemic, make it abundantly plain that present plans, as practised on this continent or elsewhere, of both storing lymph and transmitting it, are crude and unsatisfactory.

These remarks have been introduced here in order that our position as a Board in regard to the Ontario Vaccine Farm may be made perfectly clear. The case which we have to deal with is not that of the London Establishment, where their chief care is to see to the keeping calves for a week or two and dieting them properly, before inoculation, to be sure they have no foot-and-mouth disease, and to keep, with absolutely fresh lymph, the supply of humanized vaccine lymph strong and pure; but our case is how, presuming that stables are good and animals healthy, we shall be able to see maintained in the Province an establishment so conducted, that presuming an animal having been inoculated, the lymph shall be taken at the proper date, in the proper manner, in the proper amount, and so dealt with when perfectly fresh that it can be forwarded to the vaccinator, either public or the private practitioner, in a state nearest that when just taken from the vesicle. Further than this we cannot go, except that we can teach, in season and out of season, that given all these desiderata, the lymph may be rendered speedily inert by the ignorance, neglect or carelessness of the vaccinator—not to mention heating in transit, etc.

A grant has been practically placed in our hands by the Government, with the order that we shall see that it be not spent unless we can assure them that it is being devoted to the development of an establishment supplying in everyway vaccine, not cheaper in price, but superior in results to that already in our market.

To us the question simply is—can it be done, and if so, how? I have, I think, both by statistics and facts regarding fresh bovine virus, shown how crude and unsatisfactory present supplies, both in Britain and United States, are, and at present I think we may conclude that Dr. Stewart's Farm is neither better nor worse, except in so far as our Canadian climate may be better, and worse because as yet his experience is limited.

To answer the question I have put for ourselves, I would in the first place say that, given clean, airy stables, and healthy calves, given a careful watching the temperature of the animal vaccinated, the maturation of the vesicle, etc., we are to look to the biologist for the secret of success in the future treatment of the vaccine virus. Our object must be to maintain the lymph so that vaccinations will approach 99 per cent. of successes in primaries, and this must be by preventing organic change or putrefaction in the lymph. Referring to *B Termo*, *Spirillum*, and other agents of putrefaction, Sternberg sums up his remarks by quoting Duclaux, who says, "without them organic matter, even exposed to the air, would not be destroyed, or would be transformed with extreme slowness, in consequence of a slow combustion produced by oxygen. With them on the contrary, its destruction takes a rapid march and becomes complete."

How, then, are we to prevent this organic change?

By 1st. Removing air with its bacteria—always present;

2nd. Removing moisture, making decomposition impossible;

3rd. Removing heat, which makes decomposition rapid.

In practice, as regards vaccine, this appears to me to mean:

(*a*) Dry ivory points in a hot oven, then charge as soon as possible thereafter.

(*b*) Maintain in every way possible vaccine vesicles unbroken.

(*c*) Charge all the points at one sitting, never touching a vesicle a second time.

(*d*) Place the charged points at once under a clean bell-jar with hygroscopic substances to absorb moisture.

(*e*) Keep bell-jar always cold by surrounding it with ice.

(*f*) Exhaust, when jar is conveniently filled, the air from the jar, which likewise means the moisture both of the air and the lymph.

(*g*) Leave the jar thus exhausted, surrounded with ice, say, for 24 hours, then either store the points (*h*) in a tightly covered glass jar, with a piece of hygroscopic substance, or pack them at once in such a material as will exclude air and moisture, then placing these, with hygroscopic substances in jar, in refrigerator.

(*i*) Send, with date when charged, directions to physician to use all at one sitting if possible, and if not, to have them closed up tightly and stored away in a cool, dry place.

More than this we hardly need try to do. This much I think we may fairly insist upon. Require less than this and I think we need not expect to obtain results in any way superior to those from the vaccine of reputable United States establishments.

Remembering that the claim made upon the Legislature for aid was that Ontario might have, not a cheaper, but a better supply than she has hitherto obtained, I conceive that it becomes the plain duty of the Board to insist that, in recommending the payment of a part or the whole of such a grant, the recipient of the grant give ample proof that every endeavour is being made by him to carry out the views of the Board regarding the intention of the Legislature when making the appropriation.

Whatever may be the opinion of the Board on the views presented in the report, I trust that it will state, by resolution, what in its opinion is necessary that I should see carried out.

All of which is respectfully submitted,

P. H. BRYCE, Secretary.

TORONTO, Dec. 14, 1886.

To the Chairman and Members of the Provincial Board of Health :

GENTLEMEN,—In accordance with the Resolution adopted by the Board, I have made my second visit to the Vaccine Farm at Palmerston in company with Dr. Yeomans, and have the honour to inform you that matters were found in a very satisfactory condition, and there is evidence that every effort is being made to have a regular supply of lymph kept on hand and in the highest state of purity and activity. The various difficulties connected with the practical work were discussed, and interesting results of Dr. Stewart's experience were given. We were shewn an inoculated heifer at the fourth day of development of the disease and found her a healthy animal vaccinated with every possible care. We were likewise shewn the method adopted in securing the animal while the lymph is being taken.

The stables continue to be maintained in a healthy and cleanly condition, and the animals to be vaccinated are of good quality.

Dr. Stewart is desirous of making his work as thorough as possible and has adopted whatever suggestions are likely to assist him to this end.

He has furnished me with a brief statement of work done and results which I append.

PALMERSTON, Dec. 15th, 1886.

DR. P. H. BRYCE.

DEAR SIR,—Referring to your request for a report of Vaccine Farm I would submit the following :

I have vaccinated during the year about one hundred heifer calves, and, with very few exceptions during the hot season, they have taken successfully. I find that the vesicles mature in the cold weather in five or six days and the crop of vaccine lymph at this season is more abundant, and more effectual vaccinations follow.

In hot weather I have found in some instances the vesicles to have taken twelve or thirteen days to mature and the resulting lymph scanty and less effectual.

With regard to the drying process I have adopted the one recommended by yourself, viz: a small tin refrigerator well supplied with ice, in the bottom of which is placed a shallow vessel containing strong sulphuric acid ; the points are placed on the shelving in the upper part of the refrigerator for about three hours which I find quite long enough to dry them thoroughly ; they are then put in glass stopped bottles and kept in an ordinary refrigerator.

The demand for vaccine during the year has been very small, owing to the general vaccination last year I am happy to say, however, that the profession and Local Boards of Health in the Province have given me a very fair share of their patronage and I have heard very few complaints of non-successful vaccination, but have received many congratulatory letters on the successful results.

Yours faithfully,

J. STEWART

Summary of Replies to Vaccination Circular, dated November 6th, 1885, making enquiries regarding the Results of Vaccination with different Forms of Lymph.

Total number of answers from Doctors.	By what Form the reports was supplied.	Total number of Vaccine Points used.	Average percentage of successful "takes" in primary vaccinations.	Average percentage in re-vaccinations.	Miscellaneous.	Remarks.
1091	No. 1 Washington, D.C. " 2 Boston, Mass. " 3 Lancaster, Pa. " 4 New York. " 5 Chicago.	37416	No. 1—80.40 " 2—80.75 " 3—59.75 " 4—71.90 " 5—33.26	No. 1—68.80 " 2—57.70 " 3—52.54 " 4—46.60 " 5—31.62	A few points from the following places were received, but not a sufficient number nor data to give a correct average: Toronto—Lyman. Engleford, Ill., Druggists, Dixon & Co.	Some medical men did not keep a record of either primary or re-vaccination, and in a few cases, while a record of the primaries was kept, the re-vaccinations were not looked after. One doctor—Dr. Carter, of Burlington—got ten points of the Washington virus, nearly all of which succeeded, and those vaccinated by arm-to-arm process from the lymph produced by the original bovine vaccinations. He says he was fairly successful in this, both as regards primary and secondary vaccinations. Very few of the reporters adopt arm-to-arm vaccinations, as they say the people as a rule are strongly against such practice.

REPORT *RE* ABATTOIRS AND SLAUGHTER-HOUSES.

(*Including Report* re *Toronto Cattle Market.*)

I. — Report *re* The Toronto Cattle Market.

To the Chairman and Members of the Provincial Board of Health :

Gentlemen,—In discussing the question of the position of this Board with regard to the proposal to perpetuate and extend the present Toronto Cattle Market, we have a number of points presented for our consideration :

1st. The present market and its condition in relation to the question of nusiances.

2nd. The proposed enlargement and improvements.

3rd. The legal status of this Board with regard to any action which might be taken in regard to the present market, as a means of preventing the perpetuation of the market on its present site.

4th. The urgency or advisibility of action being taken by the Board.

1st. The present market and its position in relation to the question of nuisances :

(*a*) Site of Market, a clay hill-side.

(*b*) Drainage toward the Garrison Creek ravine.

(*c*) Uncovered yards.

(*d*) Covered pens with water draining toward them.

(*e*) Broken floors, and the manure tramped into the holes.

(*f*) Condition during wet, warm weather.

(*g*) Evidence of nuisance by the Local Board of Health, Members of Council, newspaper reporters, local public opinion.

(*h*) Undeveloped state of immediate vicinity, as regards buildings.

These points might all be discussed at some length, but the present and past action in regard to the market are probably as good and sufficient proofs as are necessary, that the present market is unsatisfactory and a nuisance.

2nd. The proposed enlargement includes in its consideration : (1) Provision for 1,100 cattle, 1,100 sheep, and 300 pigs ; (2) The arrangements for cleanliness ; (3) The local injury to property, and to city development.

I have endeavoured to form an estimate of the amount of *excreta* daily produced, were the number of animals provided for in the new scheme present in the pens.

Alderman Frankland, according to newspaper reports, provides in his scheme of improvement for 1,100 cattle, 1,100 sheep, 300 hogs.

From *Tables* prepared from various reports, the following animals give of *excreta*:—

		Excreta.	Water dry solids.
1,100 cattle = 27½ tons		55,000 lbs.	16,500
" "	Urine.	44,000 "	1,320
1,100 sheep	Excreta.	6,111 "	1,832
" "	Urine.	4,777 "	147
300 pigs	Excreta.	1,684 "	499
" "	Urine.	1,302 "	40
	27½ =	112,874 lbs.	20,338 lbs.
	or 56 $\frac{432}{2000}$ tons.		10 $\frac{169}{2000}$ tons.

The calculations thus made are drawn from accurately prepared statements, prepared by the Professor of Agriculture, Guelph College, also from "Johnston's Agricultural Chemistry," etc., and are practically correct. From this it appears that Alderman Frankland's scheme proposes to deal with a possible daily amount of animal refuse of fifty-six and a quarter tons of solid *excreta*, and ten and one-tenth tons of solids from the fluid *excreta*, or 2,542 gallons of urine in all.

Now, what is his scheme?

He provides for as many pens as there are car-loads of cattle brought for sale.

At the corners of each of 40 pens—cattle, 2 sheds; sheep, 22 pens; hogs, 5 pens, half uncovered; total, 69 pens—are gratings described as in next sentence:—

In forty-two cattle pens, it is proposed to have a grating with cess pit (capable of being cleaned out), towards which from the sloping floor, all of the urine is drained, and in which the solid *excreta* are deposited; these cess pits to be connected with a twelve-inch drain pipe; this into an eighteen-inch drain, which is to carry away all the fluids into the Garrison Creek sewer, and which is then to be deposited into the bay. What these amounts are have been already stated.

The whole of this is estimated by the City Engineer, with other improvements, to cost $25,000. He provides, however, for more, or sixteen pig pens; but Alderman McMillan thought Alderman Frankland's scheme might be started at $15,000 in the meantime. Provided that the cess pits are cleaned daily of their fifty-six tons of *excreta*, for which there does not seem to be any provision made in Alderman Frankland's scheme, and of which the cost is not estimated, there is still the difficulty remaining that our bay would be polluted with 6,259 gallons of urine daily, a nuisance, the character of which may be illustrated by a visit to the Gooderham & Worts cattle byres, which, depositing the urine in the bay at a distance from houses, has been pronounced a nuisance by the courts already. Whether the present cattle market is a nuisance, or whether the improvements are going to lessen it or create a greater, remains for the Committee to decide. Regarding the nature of hog pens, with 300 or 400 hogs, there is abundant evidence before the Board from different parts of the country, of the pestilential odours coming from such piggeries, belonging to cheese factories, even in country places, throughout the warm months; while the passing of a train loaded with hogs is for our purposes sufficiently illustrative.

I quote the following from a report *re* nuisances arising from piggeries in connection with cheese-factories:

"While in solids and fluids of a decomposable character, it is the *aerobies* or those *bacteria* producing fermentation of a less disagreeable character, which attack the sub-

stances first, there will, nevertheless, soon be set up a decomposition in the deeper parts of these solids and fluids by the *anaerobies* or *bacteria* of putrefaction, by which disagreeable gaseous compounds, as *acetic*, *butyric*, *valerianic* and other acids, usually combined with compound ammonias, are developed, and which, owing to the admixture of sulphur and phosphorus compounds, give off the putrid and disagreeable odours usually referred to in the process of putrefaction. Especially is this the case with regard to the nitrogenous matters contained in the solid *excreta* of pigs, which is of all barnyard manures the coldest, in other words, the slowest to ferment, and yet, which gives off, owing to this fact, the most repulsive odours of any. So strong, indeed, is this odour that when the manure is applied to the soil in large quantities the smell is imparted to the root crops to such an extent that Sprengel states the leaves of tobacco manured with it become unfit for smoking."

In connection with the question of nuisances from *excreta*, may be mentioned the inevitable and intolerable nuisance arising from the present lack of system in connection with the slaughter of the animals sold at the market. After being sold they are sent in droves through the heart of the city to slaughter-houses situated on every high-way leading into Toronto. These, being beyond the city, are scarcely, if at all, controlled; and hence suburban residence, throughout the summer and autumn months, becomes most undesirable.

These facts clearly point to the necessity for having abattoirs situated in the immediate vicinity of the market, thus getting rid of the inconvenience often caused by droves of cattle passing busy thoroughfares, the creation of nuisances on the leading highways coming to the city, and the dangers which the present lack of system encourages, which is summarized in the following resolution adopted by the Board as long ago as 1882. Thus I find in the minutes of a meeting of the Board, held Saturday, December 2nd, 1882, the following:—

"Moved by Dr. Cassidy and seconded by Dr. Covernton:—That whereas several dangerous diseases, *anthrax*, *trichinosis*, etc., may arise from eating the flesh of diseased animals; and whereas the stock brought to our large centres are often, from a long detention *in transitu*, entirely unfit to be slaughtered immediately upon their arrival; and whereas slaughter-houses are often kept in such a way as to impair the health of persons residing near them, it is in the opinion of this Board desirable that licensed slaughter-houses be established in the vicinity of our cities and towns, and both they and the animals to be slaughtered in them, be subject to the inspection of the Local Boards of Health and their executive officers. Carried."

The existence therefore of a cattle market, provided with proper structural and sanitary conveniences and abattoirs at some convenient point to the various railways, and as far as possible from present or probable centres of population, where the daily inspection of animals to be slaughtered may be carried on by a competent official, and where the supervision of the disposal of excreta and refuse from the slaughter-houses can be conveniently exercised, is, from the position of the present and prospective health of the inhabitants of Toronto, an urgent public necessity.

3rd. Regarding the legal status of this Board, as regards any action which may be taken:—

Act 1882, Section 3, provides for the Board's prosecuting, if, after the investigation, a present nuisance is found to exist. By Act 1885, Section 15, and sub-Sections 2 to 4, action would have to be taken through intervention of the High Court of Justice.

In view of the facts presented, it is for the Board to decide whether or not it ought to take action should the City Council proceed to extend the present market, owing to a by-law for its removal having from various causes been defeated. In this connection, too, it must be remembered that the Local Board of Health of the city has taken no action as yet in regard to preventing the continuation of the present market; but this may well have happened, since the scheme for extension and improvement has not yet passed the council. Should this scheme pass the council, the Local Board may then be fairly called upon by this Board to act under Section 36, 37, etc., Act 1884.

4th. We cannot, however, in this connection fail to remember that the Local Board and many of the city aldermen have already stated that the present market is a nuisance and a disgrace; that the Mayor in speeches has stated it as his opinion that the present was a case where it is the duty of the Board to act, and that, with one exception, every newspaper in Toronto has urged the removal of the market from its present site, both in the interests of public health, public decency and the development of the city in that locality, as well as the carrying out of the Park Drive scheme now before the people.

All of which is respectfully submitted,

P. H. BRYCE,
Secretary.

II.—The Slaughter-house and Abattoir Question—*Continued.*

Mr. Chairman and Members of the Provincial Board of Health:

Gentlemen,—I shall further discuss this subject by a remark taken from the work of H. P. Boulnois, C. E., Borough Engineer, Portsmouth.

He says in 1883: "The great necessity for the establishment of one or more slaughter-houses in any town can only fully be realized by persons who will take the trouble to inspect those which are private: they are generally placed near the shops of the butchers for the sake of convenience, the result being that they are situated in the central portions of the town, and are thus surrounded by closely packed dwellings. The private slaughter-house often consists of a stable or shed which has been converted into an ill-designed slaughter-house, badly paved, with imperfect draining. They are frequently not sufficiently lighted, ventilated or drained, and are utterly unfitted for the purposes for which they are used."

Such a statement can be made with at least as much force, regarding the slaughter houses ordinarily found in Toronto and most of our Canadian towns and villages, and with even greater force of the barns or sheds wherein slaughtering is done in country places and the suburbs.

On the surface it might naturally be concluded that in any city or town of fair dimensions the desirability to the butchers of having a common slaughter-house or abattoir to which their animals might be driven for slaughter, would be so manifest that no opposition could be raised to any such proposition. Nevertheless, it is a remarkable fact, that practically the same objections and opposition from the same quarter, are raised in Ontario against abattoirs that are made by English butchers. As Boulnois remarks:—"Notwithstanding the loss in weight incurred by the animal to be slaughtered, thus fretting and sweating in its terror, the damage to the meat by its being dressed in the same locality with the live beast, steaming and smelling in the vicinity, and the exorbitant rents demanded, still there are great objections always raised by butchers in towns to the establishment of public slaughter-houses."

Here are the objections as given by Boulnois, usually made in England, and as far as I can learn practically, the same ones, raised by Toronto butchers against abattoirs. They say:—

1. That the carriage of the meat from the slaughter-house to their shop deprives them of some of their profits;

2. That slaughtering their animals in the presence of other butchers leads to disparaging remarks and trade jealousies;

3. That they are sometimes robbed of their tools, etc.

I add an objection of similar force, and one which I am told by a butcher present, was used at the meeting before the Mayor of Toronto, a month ago, by the butchers, viz:

that in a public abattoir, the possessor of a poor quarter of meat could readily impose upon and cheat his neighbour by exchanging his meat for a better quarter.

Dr. Orme Dudfield, M. H. O., Kensington, London, one of the foremost English officers of health, writing in 1880, says: "On the whole there has been a very considerable improvement in the condition of the slaughter-houses within the last few years, and I suppose it is as satisfactory as we can expect it to be, seeing that with one or two exceptions the premises were not constructed for the purpose to which they are applied, and that the localities are mostly unsuitable for carrying on the business."

This is what is said about slaughter-houses in one of the best London districts, in which the number had at that time been reduced to 29. The process of elimination seems, however, to grow gradually, until they hope to have done away with all private slaughter-houses.

The method by which this is done is by enforcing the stringent regulations of the Metropolitan Boards of Works.

Before any slaughter-house is licensed anew, a plan of premises drawn to scale must be submitted to the Board, showing proposed arrangements for drainage, lighting, ventilation, and water-supply, with answers to the following questions:

1. "State what place for the accommodation or poundage of the cattle about to be slaughtered is to be provided; if such place has an entrance way for the cattle otherwise than through the slaughter-house; if separated from the slaughter-house by a brick partition with a door; and also what provision is made therein for watering animals.

2. State if slaughter-house and its poundage is within twenty feet of an inhabited building; and if it has any entrance opening directly on a public highway.

3. State if the entrance to the premises is apart from and independent of any shop or dwelling house; if from a street at the side or rear; and also the height of the entrance gates.

4. State the dimensions of the slaughter-house, length, breadth, height to eaves, and construction of the roof, and give similar information about the poundage.

5. State if slaughter-house and poundage are drained by glazed pipes communicating with public sewer, or how; how drains are trapped, and if gratings have openings greater than three-eighths of an inch across.

6. State if floors are below level of outside road or foot-way, and if paved with asphalt, or flag-stone set in cement, or how.

7. State how walls of slaughter-house are constructed, and if they are covered with hard, smooth and impervious material to a height of at least four feet; and if so, state what material is used, and to what height it is carried.

8. State how slaughter-house and poundage are lighted, if with lantern, sky, side lights, or otherwise.

9. State how ventilated,—if by openings, windows, *louvre* boards, or otherwise.

10. State what provision is made for water supply, the capacity of the cistern, and at what height it is placed above floor-level.

11. State if any water-closet, privy, urinal, cesspool, or stable is within, or communicates directly with the slaughter-house.

12. State if any rooms or lofts are constructed, or proposed to be constructed, over the slaughter-house.

13. State if the premises will be provided with all the necessary and most approved apparatus and tackle for the slaughtering of cattle."

The following points are those everywhere urged, and I again quote from Boulnois, who urges like Dudfield, like the Louisiana Board, as indeed every author whom I have had time to consult, that private slaughter-houses should be replaced by abattoirs in all towns and cities.

In regard to abattoirs, Boulnois says :—

1st. As to site, this will depend upon the places at the command of the town.

2nd. It should be near the cattle market to prevent the passage of animals through the streets, not only on account of the great public inconvenience, but also the loss of weight to the animal (an ordinary beast is said to lose 340 lbs. in a journey between Edinburgh and London), and the heated and bad state into which it becomes from the exercise and the violent blows from the drovers' sticks.

3rd. Site ought to be isolated, and not too far from market, so that the price of meat will not be increased.

4th. It should be easily and effectively drained, and the more air surrounding it the better.

5th. It is most necessary that the live beasts be kept separate and away from the dead meat, and from where the slaughtering goes on.

Without going into the details of construction regarding any of the many good abattoirs existing in American, English, or continental cities, it may be said that it is necessary to have—

1. Places for keeping the animals to be slaughtered—properly laid floors, of course, and arranged with water and hay, well lighted and ventilated.

2. The slaughter-house, either separate or in one common long room, and separate slaughter rooms for sheep and pigs, properly arranged as to floors, drainage, protected walls, lighting, water and convenient machinery.

3. The condemned meat department—a place for suspected cattle, also place for slaughtering them, and keeping the suspected meat for examination. Meat gone bad after killing may be kept here.

4. Such meat is boiled down in some cities, in properly constructed boilers on the premises, with proper arrangements for dealing with it.

5. Special arrangements for pig-killing are necessary.

6. The *blood-house*. The blood is now utilized for making aniline dyes, and is carefully removed from the slaughter-rooms in covered galvanized iron tubes, and treated in the blood-room, the *serum albumen* run off and the solid residue removed for manure. (Vide also Introduction to Annual Report.)

7. The tripery for boiling the feet and rendering offal and tallow, with hide-stores, sale rooms, etc., is provided on the grounds.

8. Weighing-room, superintendent's room, and other departmental buildings are provided on the grounds.

9. Stables, carts for butchers' horses, etc., are provided.

Such abattoirs, varying in details and extent of completeness, exist in the larger cities on this continent, quoting from Dr. G. B. Thornton's report on the subject :

"In all instances in this country, most notably New York city, Jersey City, Philadelphia, Chicago, New Orleans, Pittsburg, Cincinnati, and Boston, where the abattoir system has been adopted, it has proven far preferable to that of individual slaughter-houses from every point of view. It has proven alike advantageous to those directly interested and engaged in the business, and to the community at large. Under this system a proper sanitary surveillance can be exercised over every feature of the business, which is impracticable with the present arrangement of individual slaughter-houses with their accompanying stock yards. It is a well-known fact that many diseased animals, and others in improper condition, though not diseased, are killed for the markets, and the meat sold to consumers as unobjectionable, though unfit for food. In many instances this

is done ignorantly, and of course innocently of wrong-doing, in others with a full knowledge of the fact. Cases of tape-worm, trichina spiralis and low grades of fever, etc., have been correctly attributed to eating impure meats, though fresh from the slaughter-houses."

For these and many other reasons fully set forth in this report, under the "Decomposition of Albumenoid Substances," this matter must be constantly kept before the public until such a public opinion is educated as will place the larger centres of population in positions of immunity from the dangers herein and elsewhere so fully set forth.

All of which is respectfully submitted,

PETER H. BRYCE,
Secretary.

III.—A SERIES OF REPORTS *RE* NUISANCES ARISING FROM CHEESE FACTORIES, CREAMERIES, AND PIGGERIES CONNECTED WITH THEM; AND ON SOME REMEDIES PROPOSED THEREFOR.

To the Chairman and Members of the Provincial Board of Health:

GENTLEMEN,—In view of the importance of this subject, as respects the public health, I have deemed it proper to draw your special attention to it, owing to the very considerable number of cases of this character which have during past, but especially during the present year, been referred to this Board, as well as owing to the great difficulty there appears to be with Local Boards in dealing with them.

I conceive that these difficulties may be briefly summed up as follow:—

(1) The difficulty arising from the double nature of the nuisance;

(2) The difficulty due to the ordinary location of cheese factories, etc.;

(3) The difficulty arising from the position held by those who frequently are stockholders, or proprietors of them;

(4) The difficulty there seems to be in devising a proper remedy for the evils arising from them.

A word or two may be said upon each of these points:—

(1) The nuisance arising from these factories is in the first place due to the nature of the refuse matter or whey remaining after the cheese has been abstracted from the milk. To understand how this becomes a nuisance we have to remember it is an animal matter, abstracted from milk—one of the very best culture fluids for microbes. After the cheese, which contains about 25 per cent. of water, 35 per cent. fat and 37 per cent. of caseine with small amounts of mineral matters, has been separated, we have left whey.

Composition of Whey.

	Per Cent.
Water	93.31
Nitrogenous matters	.82
Fat	.24
Milk sugar	4.65
Lactic acid	.33
Salts	.65

We thus see that we have still remaining, a fluid with abundant nutriment, especially for yeast ferments, but also for the bacteria of putrefaction. While it is true

that the *aerobies* or air ferments, such as the yeasts, will be first in the process of fermentation by which this whey is reduced to gaseous matter, there will, nevertheless, be abundant food for the bacteria of putrefaction (*anaerobies*) in the deeper parts of the fluid by which, such gaseous compounds, as *acetic*, *butyric*, *valerianic* and other acids, which are usually combined as compound ammonias, are evolved; and from which, owing to the admixture of sulphur and phosphorus compounds formed in the deeper portions of the liquid, are given off those putrid, disagreeable odours, usually referred to the process of putrefaction.

We have, however, in addition to the whey, the largely nitrogenous products of the excreta of pigs, which is of all barnyard manures the *coldest*, in other words the slowest to ferment, and yet which has, due to these facts, the most unpleasant odour of any. So strong, indeed, is this odour, that when the manure is applied to the soil in large amounts, the odour is imparted to the root crops manured with it, and, further, as Sprengel states, it imparts so strong an odour to the leaves of tobacco manured with it as to make them unfit for smoking. It is evident, therefore, that Duclaux's statement holds good that those more slowly fermenting compounds, which, owing to their more complex constitution, are less readily broken up into their simple elements by bacteria, always throw off more pungent odours owing to the ferments being more largely *anaerobies*, or those which feed upon the contained oxygen—as well as using up the sulphur and phosporus of such compounds.

I have thus indicated, in a somewhat exact manner, the nature of the volatile organic compounds produced by this industry, in order to make it abundantly plain that the complaints made to this Board are regarding nuisances, of the most serious and disgusting character, and such as ought to be, in the public interest, reduced to the smallest degree possible.

(2) The second difficulty is that due to the locality of these factories. They are usually in rural municipalities and often on the outskirts of villages. These latter are usually unincorporated, and so are under the supervision of township Boards, some of whose members are always living in parts not affected by the nuisances and who are therefore usually indifferent to the complaints, thinking that hyper-sensitiveness, regarding so necessary a nuisance in connection with a prosperous local industry, should not be encouraged. A greater difficulty, however, in this respect, is often owing to the fact that these members, as well as others, are shareholders in the factory, or are at least on good terms with the proprietors, since the latter take milk from them at so much a gallon.

(3) The difficulty arising from the position of those who are proprietors of the factory.

I have in the last paragraph anticipated, somewhat, what may be said regarding these proprietors. Any of us acquainted with the small hamlets scattered throughout the country are well aware that usually some three or four men monopolize municipal educational and business positions, usually on account of their greater intelligence, enterprise and wealth. These, with some of the more progressive and well-to-do farmers, are those who build and operate cheese factories.

It is very natural that, when in such cities as Toronto we find soap factories, glue factories, and fat-rendering establishments managed in the crudest manner, as regards the disposal of their refuse, that factories in rural municipalities will not be likely to have their refuse disposed of in any manner indicative of a desire for, or the necessity of, practising the most sanitary methods. Communications such as those from Tweed, Moira, Vittoria, Easton's Corners, International Bridge, Thamesford, Exeter, amply illustrate this point.

This being the case it naturally follows that the mild representations of Local Boards, when made regarding these nuisances, have passed unheeded or been laughed at; or, as in the Moira case, the Local Boards having proprietors of these factories amongst their members have in a most tyrannical fashion attempted to muzzle public opinion. Since in large measure the ratepayers of a township are unaffected by the nuisance, it is idle to say that complainants have the remedy in their own hands at the next election, since

sufficient organized influence is always present to keep the indifferent from considering the question, especially when the bracing winter air of election day has *pro tempore* frozen up the odours of a past summer.

(4) The difficulty there seems to be in arriving at some solution regarding the abatements of the nuisance.

At first sight it would appear that Section 35, P. H. Act, 1884, and Section 10, Schedule A, are sufficient directions regarding the way in which a remedy may be found. Possibly they might be regarding the factory, where Local Boards are composed of independent and careful men; but this could not be expected in the various instances I have mentioned. Regarding the keeping of hogs, I think it can hardly be said that the provisions of Sec. 7, Sch. A, would be found equal to keeping 200 or 300 pigs from creating a nuisance, even where proprietors were most willing to comply with the spirit of the Act. What further action it would seem desirable for this Board to institute whereby many persons throughout the Province may be protected from a growing nuisance, I leave to its most serious consideration. No great hardship will be placed upon any proprietor or company should they be compelled to exercise sanitary precautions in regard to these matters, while an undoubted benefit would arise to themselves from an increased cleanliness in connection with an industry, one of whose chief conditions of success is the absence, both in surrounding air and water, of whatever may tend to taint the products through putrefactive agencies.

I have the honor to be
Your obedient servant,

P. H. BRYCE,
Secretary.

The subject thus introduced by the Secretary was referred for further action to a committee composed of Dr. H. P. Yeomans and Secretary.

The following is the Committee's first report to the Board :—

December 1st, 1886.

To the Chairman and Members of the Provincial Board of Health :

Gentlemen,—Many proprietors of cheese factories in Ontario are aware of the necessity for enforcing the utmost cleanliness in everything that comes in contact with the milk, also the necessity of cleanliness in and around the factory. They know by experience that the least particle of taint about the walls or floors of the factory will certainly be imparted to the milk. The result of carelessness in these matters is that the commercial value of the cheese is lessened and the reputation of the factory injured.

Manufacturers of cheese and proprietors of factories are continually urging upon their patrons the necessity of exercising the greatest care in regard to cleanliness in the production of milk and its delivery at the factory.

The accompanying circular, issued by J. W. Robertson, a cheese proprietor, illustrates this point.

Office of J. W. Robertson,
Harriston, August 8th, 1885.

Dear Sir,—Fine cheese can be made only from sweet and pure milk, perfectly free from all taint and impurity. It is your interest as well as mine to maintain the high reputation for fine cheese which our factory has acquired. I would therefore request that you see every day that the whey is emptied out of your can, and the can properly cleaned and aired as soon as ever it reaches the stand. When whey goes back in the milk cans, this is absolutely necessary. Here let me say, that the practice of drawing sour whey in milk cans is doing more to injure the Canadian cheese trade, and destroy its reputation in the English market, than all other causes put together. Milk should always, even in cool weather, be well aired by frequent dipping and stirring.

Are your cows regularly salted?

Hoping for your attention to these matters,

I am, your obedient servant,
J. W. Robertson.

Impure milk has been delivered at factories in cases where—

1. Cows were allowed to drink the water of stagnant pools, or water containing decomposing animal and vegetable matter.

2. When cows were allowed to inhale bad odors arising from the decomposition of dead animals lying exposed in pasture fields. Instances are recorded in which the manufacture of cheese has been interfered with by the delivery at the factory of milk tainted from this cause.

In some factories it is obligatory by by-law "That no one shall be allowed to send milk to the factory who has dead animals exposed on his farm."

When cows are allowed to drink impure water their health is impaired, and the impurity of the milk may be detected by the manufacturer in the appearance of the curd, impure milk from one cow being sufficient to contaminate a whole day's supply.

In cases where farmers use the whey at home for feeding purposes, the practice of carrying whey in milk cans has been known to result in impairing the purity of the milk delivered at the factory.

The acid whey has a tendency to wear off the interior polished surface of the cans, so that it is more difficult to keep them clean. In such instances a taint is communicated to the milk from carelessness in cleansing the cans. For this reason it has been considered advisable to discourage the practice of using milk cans for returning whey to farmers for feeding purposes.

Nuisances may arise near the factories from the following causes:—

1. The whey may be allowed to fall out on the ground at the place where it is emptied into the milk cans at the factory—whey may leak through the conducting pipes leading from the factory to the large tank, where it is stored for feeding purposes.

2. Cess-pools may be created in hog-pens, or in their vicinity, by the accumulation of liquid refuse from the pens. Negligence in regard to cleaning pens and disposing of the solid refuse, or carelessness in using disinfectants in and around the pens may occur.

Saw-dust has been used in the pens in order to keep them as dry and clean as possible. This in a measure remedies the nuisance arising from liquid and solid refuse in the pens. Carbonized saw dust might be used for this purpose with advantage.

If the floors in the factory are water tight the washings of the factory cannot leak through and create cess-pools under the floor. This precaution is almost universally observed in factories. A double floor, however, may be so constructed as to permit the washings to accumulate between the boards and create an uncontrollable cause of taint in the factory. Therefore the upper floor should be absolutely water tight.

The washings of the factory consist of milk, whey, and particles of curd. These are especially prone to decomposition if allowed to accumulate in the warm atmosphere about the floor of the factory.

In a similar manner the floors of the hog-pens should be water tight, so that the liquid refuse and washings of the floors may not accumulate under the floor whence it cannot be removed.

Cheese manufacturers are anxious to adopt any measures considered necessary to secure a supply of pure milk at their factories. They also are ready to do anything they can to keep the factories, hog pens, and surrounding grounds free from cess-pools. The location and management of hog-pens, and the manner of conducting the whey from the factory to the feeding tank are questions which might be considered. No doubt improvements may be adopted and carried out which would remove all complaints regarding nuisances in connection with cheese factories.

Dry earth might be used in disposing of the excreta accumulating in hog pens. The value of the manure treated in this way would render the dry earth system less expensive.

As this is a practical question we would ask the Board to appoint a committee to enquire into the matter and report at a subsequent meeting.

Your committee would further suggest that the Board authorize a special committee to communicate with the Secretary of the Ontario Dairymen's Association, and if favourably received, to make arrangements for bringing the matter before the Association at its meeting in January next. It is further suggested that, if practicable, this committee, acting in conjunction with a committee of the Dairymen's Association, devise a scheme which shall be brought to the notice of the Minister of Agriculture with a view to obtain his opinion regarding the advisability of legislation on this important matter.

All of which is respectfully submitted,

H. P. YEOMANS,
PETER H. BRYCE.

The Committee was continued, and by resolution of the Board was directed to take, if possible, conjoint action with the Ontario Dairymen's Association, with a view to having remedies suggested and adopted for the evils complained of.

The Committee attended the Dairymen's Association, and made such representations as caused a Committee of the Association to be appointed to act with the Committee of the Board in the matter.

The following extended report of the Special Committee to the Provincial Board contains the results of the deliberations of the Committee of the Association :

To the Chairman and Members of the Provincial Board of Health :

GENTLEMEN,—According to the instructions of this Board your Committee attended the meeting of the Western Ontario Dairymen's Association at Woodstock, on Thursday, January 14th.

Through the kindness of T. Ballantyne, Esq., M.P.P., President, an opportunity was afforded for presenting the question of complaints regarding nuisances existing in connection with cheese factories.

Your Committee also presented the following propositions for the consideration of the Association, viz :—In order to consider carefully the proposed changes regarding the construction and management of cheese factories it is necessary to consider :—

(1) THE CONSTRUCTION OF CHEESE FACTORY BUILDINGS.

1. A site should be selected that will permit of efficient drainage.

2. All floors of the buildings should be water-tight.

3. Suitable troughs or pipes should be so connected with the floors that all waste water and whey shall be conveyed to their several receptacles as recommended without any leakage under or about the buildings.

4. All slops from factory floors should be conducted in a water-tight trough or pipe to an underground receptacle, from which the liquid portion shall be removed, by an underground trapped drain of a length not less than 300 feet.

5. Whey should be conveyed in a suitable water-tight trough or pipe to a water-tight tank so as to avoid any leaking or spilling—care being taken to keep such tank clean.

(2) THE PROVIDING OF MILK.

1. Care should be exercised that cows are healthy ;

2. That cows have an abundant supply of wholesome and pure water ;

3. That cows have free access to salt ;

4. That no dead animals or decaying matter be left unburied in pasture fields or around the premises where cows are kept;

5. That milk be freely exposed to the action of pure air and kept free from exposure to germs of contagious or infectious disease;

6. And that the surroundings of milkstands should be free from all objectionable odours,—*e.g.* the emptying of whey at milk stand to feed hogs.

(3) The Disposal of Whey.

1. The practice of feeding whey from each factory at one place in pens or in a large field used for this purpose should be adopted; also,

2. That water-tight troughs or pipes convey the whey to the whey-tank and that the tank be kept clean.

3. The common practice of carrying sour whey in milk cans is especially to be condemned.

(4) The Construction and Management of Hog-pens.

1. A site should be selected that can be thoroughly and efficiently drained.

2. All pens should be made with water-tight floors, and so laid that the refuse shall be conveyed in a water-tight trough to a water-tight receptacle where the solid portions may be allowed to settle.

3. The liquid portion of refuse should be removed from said receptacle and disposed of in an adjoining field, on the principle of intermittent downward filtration or irrigation as explained in pamphlet on "Disposal of Sewage," issued by Provincial Board of Health.

4. The residuum or solid matters in this receptacle should be removed and treated with dry earth as frequently as necessary.

5. All solid or other refuse from pens should be removed and treated with dry earth as frequently as necessary. In the ordinary factory 1,600 gallons of whey are daily fed.

6. Care should be taken to keep floors as dry as possible.

Your Committee also recommended the appointment of a committee composed of four of the members of the Association to discuss the question and to take such action as they might deem best on behalf of the Association; as also have further power to confer with the Provincial Board of Health and adopt such practical measures as might be necessary to remedy the evils complained of.

This Committee met at Stratford on the 22nd of January last and adopted the following recommendations, which were based on those suggested by the Committee of the Provincial Board of Health:—

Report of Committee of Dairymen's Association.

To Dr. H. P. Yeomans,

Chairman of the Special Committee of the Provincial Board of Health

Dear Sir,—In pursuance of the resolution passed at the recent Convention of the Western Dairymen's Association, a committee, consisting of Thos. Ballantyne, M.P.P., Stratford; H. Losee, Norwich; Jas. Dickson, Attwood; and James Robertson, Harriston, met at the Albion Hotel, Stratford, and adopted the following recommendations to the Provincial Board of Health:—

Re Construction of Cheese Factory Buildings.

1. Recommended that a site be selected that will permit of efficient drainage from all the premises being easily made;

2. That in the construction of the building all floors be laid water-tight

3. That suitable troughs or pipes be so connected with the floors that all waste water and whey shall be conveyed to their several receptacles without any leaking under or about the buildings;

4. That all slops from the factory floors, etc., be conducted in a water-tight suitable trough or pipe to a water-tight receptacle, and that liquid portions thereof be treated on the principle of intermittent downward filtration, or be used as a fertilizer without causing any dangerous or offensive odour; solid portions composed of curd, etc., which would make manure, to be treated with dry earth;

5. That whey be conveyed in a suitable water-tight trough or pipe to a whey-tight tank in such a way as to avoid leaking or spilling, care being taken to keep said tank clean by thorough washing.

Re Hog Pens.

1. Recommended that as far as practicable only such a site be selected as can be well and easily drained;

2. That all pens be made with water-tight floors so laid that refuse would be conveyed in a water-tight trough to a tight receptacle.

3. That liquid portion of the refuse be removed from said receptacle and be disposed of in an adjoining field on the principle of intermittent downward filtration or irrigation.

4. That the residuum or solid settlings, if any in the receptacle, be removed and treated with dry earth.

Re Disposal of Whey.

Recommended that the practice of feeding the whey from factory at one place (in pens or in a field used for that purpose), as preferable to that of having the whey returned to the premises of the different patrons, because when fed at one place, most of the whey is daily consumed before the process of decomposition is far advanced, be advocated. Advantage is thus taken of the greater feeding value of the whey, and the nuisance is minimized. Where sour whey is carried in milk cans there is danger of contaminating the milk from the cans or waggons.

Re Treatment where Whey is Returned.

Recommended that while this practice is one which should be strongly condemned, still where it is practised the following precautions should be enforced :—1. Such conveniences should be provided that no whey will be spilled in loading, or be permitted to cause an offensive odour around the tank. 2. That no whey should be emptied or fed near a milk stand nor near where milk is kept.

Re Providing of Milk.

1. Recommended that care be exercised to see that cows are healthy;

2. That cows have an abundant supply of good food and pure water;

3. That cows have free access to salt;

4. That no carrion or decaying matter is left unburied in pasture fields or around the premises where cows are milked;

5. That milk is well exposed to the action of pure air;

6. That surroundings of milk stand are kept free from all causes of objectionable odours.

The Committee also recommend that Local Boards of Health be instructed to use every reasonable means to secure the adoption of these recommendations by dairymen.

The question now presents itself to this Board as to the means to be adopted for the purpose of enforcing these changes or improvements generally in this Province.

The question of *impurity* of *milk* presents itself in this connection. Bad flavoured, tainted or impure milk has always interfered with the successful manufacture of cheese and butter. The sale of impure milk also in towns and cities has resulted in conveying and increasing disease, consequently various systems of inspection have been adopted. Here is a common ground upon which sanitarians and dairymen may meet.

The commercial interests of the country and the public health alike demand a supply of pure and unadulterated milk.

The sale of milk as an article of diet and the manufacture of butter and cheese at creameries and cheese factories are questions of interest to this Board from a sanitary point of view. In cities and towns, especially, infant mortality has been greatly increased by the sale of impure and adulterated milk.

Milk is the diet especially suited to children at that time of life, when they are least able to withstand the injurious effects of impure food. In order that it may be useful as an article of diet for children it should contain all the natural ingredients in their normal proportions. The people, therefore, look for stringent legislation against the introduction of impurities in milk and to prevent adulterations. They expect health authorities to enforce these laws. Diseases may be introduced into the human system by impure

milk. Tuberculosis may be mentioned as an instance of this. Tuberculosis is found among animals improperly housed and fed. Experiments have been made by feeding milk of tuberculous cows to other animals, which conclusively proved that this disease may be communicated through the milk of affected animals. Experience and observation also point to many facts indicating that the milk of cows affected with tuberculosis is capable of introducing the disease into the human system. In the second annual report of the Massachusetts State Board of Health it is affirmed that "milk from cows affected with foot and mouth disease may cause serious ill-health. The symptoms are loss of appetite, nausea, quick pulse, swelling of tonsils and sub-maxillary glands, an outbreak of vesicles upon the lips and tongue with a peculiar skin eruption."

Milk contaminated with pus from an inflamed udder or an abscess will cause stomatitis and diarrhœa in infants. The general care of housing cows, the treatment and care of milk, the influence of different kinds of food and water on them, are all subjects of interest to sanitarians.

The germs of contagious and infectious diseases have been known to be conveyed in milk.

It has been frequently observed and noted by manufacturers of cheese and butter that milk possesses the property of absorbing odours and taints of various kinds. The members of these associations are familiar with instances of this fact and we merely allude to it.

Epidemics of scarlet fever, typhoid fever, and other diseases have occurred and been transmitted by means of milk.

An epidemic of typhoid fever in the town of Eagley, England, was investigated by the Medical Inspector of the Local Government Board. It was found that a small brook had been used by mill operatives in such a way that large quantities of faecal matter were daily emptied into the stream. The water from this brook was used at a dairy. One of the workmen was ill with typhoid fever. There was no positive evidence that the milk was diluted with this water, but it was acknowledged that the milk cans were washed with it. Of fifty-seven families supplied with milk from this dairy fifty five were attacked with typhoid fever; one hundred and forty six persons were ill with the disease. The inspector said "Not one household to which the milk was traced was free from the disease."

In an epidemic of scarlatina in South Kensington, England, one of the first cases occurred in the house of a man whose wife milked cows. Milk from these cows was supplied to about twelve families. In six of these families scarlatina occurred in rapid succession, at a time when the disease was not epidemic and without any communication having taken place between the affected persons and those who bought the milk. Within recent years a number of epidemics of scarlatina and typhoid fever have been traced to milk contaminated with germs of these diseases.

Washing the milk cans with infected water, diluting the milk with impure water or exposing the milk to an atmosphere loaded with disease germs may lead to the contamination and consequent transmission of the disease.

Your Committee is glad to notice that the necessity of furnishing good and pure milk at cheese factories has been urged strongly at meetings of the Dairymen's Association.

The laws, or rules, laid down for the regulation of the milk supply at factories have been enforced by cheese manufacturers in several places. This has initiated a good and wise movement, calculated to increase the commercial value of cheese and also to lead to the enforcement of laws for protecting the public health.

At a meeting of the Eastern Dairymen's Association lately held in Belleville, this question was referred to by several members. Mr. D. M. McPherson, of Lancaster, Ont., refers to "the good reputation of Canadian cheese makers in foreign markets at the present day." He suggests, however, "means whereby Canada can still make advances toward a better article and obtain an increase in price", and says that it is not by the improvement and advance of a few factories that the good reputation of cheese can be increased, but by the large percentage of perfect make to the whole production."

The better the whole production of the cheese of a country the higher will be its reputation in a foreign market.

He suggests among other things, "the appointment of expert superintendents by counties or groups of factories, and the careful inspection of cheese before boxing." This suggestion has also been made by others, and carried out in some parts of the United States.

A system of sanitary inspection of milk has been tried in some States in the neighboring republic, with the object of preventing disease and protecting the public health. We will refer to one State, the State of New Jersey, where a law was enacted in 1880, under which an inspector was appointed. The work of inspection has reduced the quantity of impure milk offered for sale, and at the same time caused a steady yearly advance in the commercial value of milk.

The advance in price of a forty quart can from 1879 to 1883 amounted to $134.20 in favour of each farmer, estimating the value for one year. The price of milk was very nearly doubled from 1879 to 1883, during the years of inspection.

For the purpose of inspection, the State was divided into sections, and assistants appointed. At several places local health authorities had charge of the work of inspection, without any expense to the State.

At Vineland an energetic and earnest Board of Health accomplished all that could be desired in inspecting and regulating the milk supply. In this town the quality of the milk was kept excellent by the constant supervision of the members of the Local Board of Health, and the work was well done, without any expense to the State.

In closing this report the Secretary of the Board says: "I would repeat what I have stated in former reports, that to do the work of inspection in a thorough manner, and to accomplish better results, more attention must be given to the subject by local health authorities. It is clearly the duty of these Boards to interest themselves in this matter, and while a general oversight should be maintained by a State inspector, the work and the burden of expense should rest on the local authorities."

As far as this view of the question is concerned our municipal and public health Acts provide for the inspection of milk in the interests of public health. Section 13, sub-section 10, of the Municipal Amendment Act "authorizes councils of municipalities to appoint inspectors and to provide for inspection of milk offered for sale and for licensing and regulating milk vendors.

Section 10 of the Local Health By-Law, in force in all municipalities in Ontario, unless repealed, provides for the inspection and regulation of cheese factories and creameries by the Local Board of Health, and Section 11 for the inspection of milk. The authority for enacting and enforcing Section 10 is derived from the Municipal Amendment Act.

In conclusion your Committee would recommend:—

1st. That an inspector or inspectors be appointed under the Minister of the Department, which inspector should have power to inspect nuisances and unsanitary conditions existing in and around cheese factories and creameries, and report to the Minister.

2nd. That they assist, under the direction of the Minister of Agriculture, in carrying out recommendations and suggestions similar to those made by the Western Ontario Dairymen's Association with regard to—

1. Construction and management of cheese factories, creameries, and hog-pens.
2. Disposal of whey and the providing of milk.

3rd. And that your Committee be further empowered and directed to act with the Committee of the Dairymen's Association, to secure such legislation as is necessary to carry out those suggestions.

All of which is respectfully submitted,

H. P. YEOMANS,
PETER H. BRYCE.

The following from Prof. J. A. W. Robertson, Instructor in Dairying, etc., Agricultural College, a member of the Committee of the Dairymen's Association, is an answer to an enquiry from the Secretary of this Board as to what progress in experiments was being made under his supervision.

GUELPH, 19th July, 1886

MY DEAR DOCTOR,—I have your favour of the 16th. I have borne in mind and put to a practical test some of the recommendations for dairies and their surroundings, which were discussed at the winter session of your Board. I am not yet prepared to report exhaustively on them, as long enough time has not passed to permit of a satisfactory trial. But, so far as shown, the application of the "downward filtration system" for the disposal of liquid refuse from hog pens, seems easily practicable and effective. I have had that system in operation for a short time, in connection with a hog-pen erected, mainly for the purpose of testing its suitability. Fifty hogs are kept. The pen is a building 60 feet x 24 feet. The liquid refuse is conveyed in two gutters to one end of the building, where they empty into shallow, open trenches in a field; the trenches are five in number, about one foot wide, eight inches deep, and each 150 feet long; they are from twelve to eighteen feet apart. Between the trenches and running parallel are covered tile drains, from two feet to two and a half feet deep. The liquid refuse is absorbed or filtered away before any very offensive odor arises from it. The land between the trenches has been sown with rape. A crop with deeper-reaching roots would have been better had the ditches been prepared earlier in the season. I will have samples of the water, as taken from the tile drains, analyzed and send you a report. I do not wish to say much to induce other creameries or cheese factories to adopt the filtration plan till we find whether it works well the whole season. I am already satisfied that it will just meet the case as to the disposal of sewage and slops from the manufacturing rooms of the factories. I do not take up your time by describing and discussing the method of construction for hog-pens, but I have been giving that point further attention and trial. However, as no change in these buildings could well be effected in the middle of the manufacturing season, it will be soon enough, if I send you plans and suggestions, accompanying a report on the "Filtration System" for the whole season.

Re those complaints which you have received, let me say that I have also listened to a number from residents near cheese factories and hog-pens; the blame is mostly laid on the latter. I have been away a few times, visiting factories for the instruction of cheese-makers. I cite two cases in point: At Bluevale, the resident physician attributed the outbreak of a fever (which he feared was typhoid) in the family of the cheese maker, to the nearness of a foul-smelling hog-pen. In that case a little ditching, at a cost of a few dollars would have temporarily abated the nuisance. That I pointed out to the manager, and instructed him to have it done at once. I mention that case to shew how all immediate danger to the health of the community, and offence to near residents might have been avoided by a timely enforcement of the regulations already issued.

At a large factory near Listowell, complaint was made by some neighbours. The company owning the factory at once provided a large underground tank, into which all the liquid refuse is conveyed. Said tank is pumped empty, and the liquid, as manure, is conveyed to a farm twice or three times a week. I will follow up the case and learn whether any nuisance is caused by the distribution of the liquid on the fields.

I have nothing *new* that would interest your Board about the unhealthfulness of milk from cows improperly fed, watered, stabled or cared for. I am investigating, with a view to discover definitely the effects of the different treatments and conditions, on the quality of the milk, butter and cheese commercially. I have not convenience nor as yet the skill required in examining milk for the presence of such germs or spores, as I understand, are the immediate cause of outbreaks of diphtheria and typhoid fever. If you can spare the time, and would undertake the investigation, I will send you samples of milk for examination. I can by exposure, impregnate milk with such a taint as would greatly lessen its value for cheese or butter-making, and send you samples. You may be able to determine whether or not such a taint is but an indication of the presence of dangerous germs. It is also of importance to know as much as possible of the nature of these germs in such milk, and whether the presence of lactic acid and salt would impair or destroy their vitality. The taints, which in milk often give the taste and smell faithful warning of its unfitness for food, are either removed, or their presence is hidden by these agents, acid and salt.

Re a pamphlet, I do not think it would do much service before Xmas. If a concise and practical one were issued before the meetings of the convention of dairymen in January, 1887, I think many of its recommendations would be adopted for another season. This one is now too far advanced for much change to be made in factory surroundings. I will be glad to have a visit from you, when your time will permit.

I am,
Yours truly,
J. A. M. ROBERTSON.

DR. P. H. BRYCE, Toronto

REPORT OF COMMITTEE ON FOOD AND DRINKS *RE* REPORT *RE* PUBLIC ICE SUPPLIES.

To the Chairman and Members of the Provincial Board of Health:

GENTLEMEN,—Your Committee on foods, drinks, etc., begs leave to report certain facts which may well be considered from the standpoint of health, as well as from the legal standpoint, upon the question of *ice supplies.*

Ice Supplies from the Standpoint of Health.—The fact that water below 32° expands, of course explains the fact that ice forms first on the surface of water in most instances. The crystallization of the upper surface of water, like all similar processes, tends to eliminate from the crystal formed any foreign substance, and hence it is that the surface-suspended impurities of the water, except so far as they may become centres about which the crystals tend to form, are not included in the surface ice to the same amount that they were in the water, previously at the surface.

Examination of ice on a sewage-contaminated river, say the mouth of the Don, makes it abundantly plain, however, that dissolved impurities, *i.e.*, the colouring matters of urine are included in the ice forming at the surface. This being the case, it is but natural to suppose that microscopic organisms included in such impure waters might likewise be included in the ice.

Such has been found to be the case. Prof. Pumpelly, of Newport, N. J., tested ice as to the presence in it of active microbes, and states that ice in freezing does not free itself from or destroy these organisms, since he found that pieces of ice, taken from the centre of blocks of ice, in many instances infected sterilized beef infusion with the germs of putrefaction.

The impurities due to decomposition of sawdust found in ice taken at Rye Beach seem to have been the sole cause of an outbreak of sickness there, and was found to contain relatively to Boston ice much more *albuminoid* and *free* ammonia.

In a paper by Dr. Pengra, Michigan, the ability of a solution of urea in water to eliminate the urea by freezing, was tested. He found the following :—

100 c. c. of water contained before freezing	.83 grains
" " " from ice	.58 "
" " of the water below the ice	1.3 grammes

In other words 40 per cent. was cast out by freezing to a certain depth.

Another experiment with grape sugar showed, by freezing, purification to the extent of 55 per cent., while another experiment with dissolved arsenic showed a purification to the extent of 40 per cent.

Hassell gives the following result of freezing :—

	Original Solution.	Ice.	Water Left
Total solids	27.0	3.0	14.2
Chlorine	1.94	0.9	
Lime	10.53	trace.	14.11

On colloids (e.g. egg albumen),

1,000 c. c. of solution of egg albumen was frozen solid.

50 c. c. of upper	$\frac{1}{3}$ = 3.015 grammes
" " middle	$\frac{1}{3}$ = 4.19 "
" " lower	$\frac{1}{3}$ = 6.87 "

Thus a gradual purification from above downward is shown.

It is thus abundantly plain from these experiments that there is danger in ice from impure water. This danger is, as will readily be understood, increased in ice from shallow and artificially made ponds, usually containing vegetable matters in larger amounts, and in which with rapid freezing and the relatively small amount of water left is likely to materially increase danger from such.

That real danger attaches to ice taken from sewage-polluted water, is hence abundantly proven, both by experiment and experience from sickness, and that this Board ought to urge greater care in the taking of ice, and exercise all legal powers for the prevention of ice taking from polluted water, does not require fuller exemplification.

Ice Supplies from the Legal Standpoint.—By some strange oversight there is nothing in the Municipal Acts giving councils power in so many words, to pass by-laws regulating ice supplies. The by-law of Health Act of 1884, similarly had this provision left out.

In the present state of the Health Acts, your Committee deem it proper to indicate what clauses they think may be so read as to give Local Boards and health officers power to regulate ice supplies.

(1) Public Health Act, 1884, Sec. 38; (2) Schedule A, Sec. 1; (3) Schedule A, Sec. 11.

These would seem sufficient for dealing with the evil in most cases when Medical Health officers' opinions are supported by the Board; but in such instances as that referred to your Committee from the Medical Health Officer of Hamilton, Section 11 of Schedule A, seems to be the only one by which the medical health officer has power to do anything, and this can only be done by his first testing the ice and proving it to be relatively impure.

In the present unsatisfactory condition of the laws bearing on the subject, your Committee would strongly urge that the Committee on Legislation again press this important matter on the attention of the Minister.

We have the honour to be,

Yours respectfully,

P. H. BRYCE.
FRANCIS RAE.

REPORTS OF THE COMMITTEE ON SEWERAGE, DRAINAGE AND WATER SUPPLY, *RE* PROPOSED SYSTEMS IN STRATFORD, OWEN SOUND, ST. CATHARINES, BROCKVILLE, TORONTO AND CORNWALL.

TORONTO, 8th June, 1886.

To the Chairman and Members of the Provincial Board of Health:

GENTLEMEN,—Your Committee on Sewerage, Drainage and Water Supply, to whom were referred the proposed systems of sewerage of the City of Stratford, and of the Town of Owen Sound, begs leave to present the following reports of the sub-committee appointed to visit those places, and reports that your Committee concurs in the said reports.

Respectfully submitted.

WM. OLDRIGHT.
J. GALBRAITH.

STRATFORD SEWERAGE.

TORONTO, June 8th, 1886.

To the Committee on Sewerage, Drainage and Water Supply:

GENTLEMEN,—In accordance with your instructions I visited Stratford on June 1st, to examine the outlet of the proposed sewerage system, and to gain sufficient information to enable you to form a fair judgment of the merits of the scheme.

It is proposed to build a system of sewers in the City of Stratford sufficient to carry off, in addition to sewage proper, the roof water which falls during ordinary rainstorms, and also to intercept the ordinary flow of two small streams on the south side of the

Avon. It is not intended to provide for carrying through the sewers the roof-water due to the heaviest storms to which the place is liable, nor to carry the rain water falling directly on the ground. Provision will be made for carrying off, on the surface of the ground, this water, and also the over-flow of the above-mentioned streams.

After an examination of the record of the rainfall at Stratford during the last twenty-five years, as given by the Meteorological Department, I advised the enlargement of certain portions of the proposed system.

I also advised the employment of no pipes of less than 8in. diameter.

Mr. Macdougall, the engineer, to whom the proposed scheme is due, has concurred in these changes.

It is proposed to carry the sewage of the north side of the city across the Avon, at John St., by an inverted siphon to connect with the main sewer, thus giving the sewage of the whole city a single outlet.

This is located on the line of Hamlet Street, which is, I believe, the city limit.

Five miles below the City of Stratford is a small village called Avonton ; about three miles further on is the village of Avonbank, and three miles below this village the Avon joins the Thames river ; three and one-half miles below the junction is the town of St. Mary's. The river passes through ordinary farming country between Stratford and St. Mary's.

There is a cheese factory on the Avon about three miles below Stratford, which I visited. I believe there is another one at Avonton.

At the time of my visit, very little rain had fallen for several weeks, and the river was consequently low. I measured the flow and found it to be between five and six millions of gallons per twenty-four hours.

In the driest season the flow would be considerably under this amount.

Stratford has a system of waterworks, the pumping capacity of which is two and one-half million gallons per twenty-four hours.

The consumption hitherto has not amounted to more than from three to four hundred thousand gallons per diem, of which it is estimated the Grand Trunk Railway uses one-half. The greater portion of the water used by the railway is carried off by the locomotives.

I think that it would be fair to estimate the amount of sewage which finds its way back to the river per diem, as not more than two hundred and fifty thousand gallons. If we consider the before mentioned volume of flow of the river a fair average, the estimated quantity of sewage would form about five per cent. of the total flow.

It is for your Board to decide whether it is advisable or not to throw this sewage directly into the river.

My own opinion is, that it would be advisable to allow the discharge of the sewage directly into the river with the thorough understanding that such an arrangement was to be considered as being only temporary, and that the city of Stratford should be prepared to erect purification works whenever called upon to do so by the Provincial Board.

In view of the future erection of such works, I do not think it necessary that the outlet should be as far down the river as Hamlet Street; I think that it might be made at any point between Hamlet Street and the island shown on the plan opposite the cemetery.

The erection of sewage purification works would probably necessitate the elevation of the sewage from five to ten feet by steam pumps.

One point in the working of the sewerage works which cannot be too strongly insisted upon, is that efficient means be provided for flushing the pipes.

In conclusion, I wish to thank Mr. Macgregor, the Mayor, and other gentlemen whom I met, for their courtesy in affording me every opportunity for gaining the necessary information.

All of which is respectfully submitted,

J. GALBRAITH.

OWEN SOUND SEWERAGE.

To the Committee on Sewerage, Drainage and Water Supply:

GENTLEMEN.—After leaving Stratford, I went to Owen Sound. There it is proposed to sewer that portion of the town lying on the east side of the Sydenham River. The pipes are intended to carry off both sewage and ordinary rainfalls, including in the latter case, the water which falls upon the surface of the ground, as well as the roof water. It is proposed to discharge the sewer water directly into the river at four points, marked A, B, C, D, in the plan submitted to the Board, and into the Sound at a point marked E.

The most thickly populated portion of the town is that which is proposed to be drained by the sewers, whose outlets are A, B, C, D, and the main question at issue is whether or not an intercepting sewer should be built, which would carry the sewage to some point down the bay.

The population of Owen Sound is 5,700 and that of the portion of the town to be sewered is said to be from 4,000 to 5,000.

There is a good gravitation-waterworks system, the supply for which is obtained from abundant springs. The consumption at present is 100,000 gallons per diem.

The waterworks manager, Mr. Parker, is of the opinion that with the present population there might be an increase of fifty per cent. in the consumption of water within a few years. He also informed me that in his opinion it was not probable that more than 200 water-closets would be used with the present population.

The minimum discharge of the Sydenham river at periods of low water is about 18,000,000 gallons per twenty-four hours. I am indebted for this information to Messrs. Wm. Kennedy & Sons, who, from their extensive experience in putting in mill wheels, are in a position to give reliable information upon this point.

Mr. Robinson, C.E., who originated the plans submitted to your Board, kindly accompanied me over the ground, and brought me to points where I could examine the flow of the river to advantage.

The river, where it is proposed to discharge the sewers, is from sixty to one hundred feet wide and nowhere less than five or six feet deep at low water. It is subject to irregular fluctuations of level, due to winds on Lake Huron and the Georgian Bay.

My opinion is that it will be perfectly safe to discharge the sewage into the river as proposed.

There will probably not be more than 200,000 gallons per day of ordinary sewage for many years to come; along with this will flow even in the driest season 18,000,000 gallons of pure water. The floods, which occur at least once a year, will sweep the river clean to its mouth.

I do not anticipate that in the case of Owen Sound there will be sufficient filth even to cause a nuisance.

With regard to the other features of the proposed plan, it will be unnecessary to say much.

It may be necessary to determine more closely the sizes of the various pipes, but such details may be safely left to the engineer in charge.

There are few towns which have the advantages Owen Sound possesses for securing a constant supply of water to the sewers, and it should not be difficult to build a perfectly efficient system at a minimum of cost.

I feel safe in giving it as my opinion that if any malaria makes its appearance, in consequence of the sewerage system, it will be because of neglect of ordinary precautions in construction, and not on account of the outlet.

I think that if an intercepting sewer were built, its object might be to a great extent defeated by flux and reflux of the water, due to the winds on the lake. To carry the

sewage so far as to avoid danger from this source, it would probably be necessary to erect pumping works.

In conclusion, I must acknowledge my indebtedness to the gentlemen already mentioned, and also to Mr. Rutherford, the Mayor, Rev. Mr. Mulholland, Chairman of the Local Board of Health, and other gentlemen, for their courtesy and kindness in furthering the object of my visit.

All of which is respectfully submitted.

J. GALBRAITH.

ST. CATHARINES SEWERAGE.

To the Chairman and Members of the Provincial Board of Health:

GENTLEMEN,—Your Committee on sewerage, drainage, and water supply, having been requested by the Chairman of the Board to consider the accompanying scheme for a system of drainage for a portion of the city of St. Catharines, begs leave to report as follows:—

Your Committee having met and obtained from Mr. Alan Macdougall, (the engineer by whom the scheme was proposed), a plan and some additional information, thought it would be advisable to meet with Mr. Macdougall and discuss the desirability of certain modifications of the scheme.

The proposal to have the upper portions of the joints of sewers open has been deemed objectionable, inasmuch as the open joints, if they permitted the passage of sub-soil water, might also permit the passage of earth or sand, and lead to silting up of the drain. They would also allow of the passage into the soil of sewage, especially when the drains are flushed, and of sewer gas. If laid in the clay (as would be the case throughout a great portion of the system), the open joints would be of little use for sub-soil drainage, even were they unobjectionable otherwise.

The following modifications have therefore been agreed upon:—

To drain cellars by means of porous tiles placed outside the house walls at a proper depth below the surface of the cellar floor. To give these porous tile drains trapped connection with the sewers or house drains (outside the house walls of course).

To properly grade the streets, digging gutters or water-courses at each side of the roadway to carry off the surface water and storm water. All these water-courses to be properly graded down to the railway ditch referred to in Mr. Macdougall's report as the point of outlet for the proposed sewerage system. This ditch to be kept free from vegetable growth and other obstructions by the corporation of St. Catharines.

Should the Railway Company object to the use of this ditch for these purposes, an offtake ditch to be dug by the corporation. The use of the railway ditch is a portion of the original scheme.

If at any place the grading of a water-course causes a ditch of such a depth as to be dangerous, a covered tile-drain should be laid at such place or places.

The diameters of the main sewers will be lessened in consequence of the exclusion of storm water, and of a portion of the sub-soil water.

With these modifications, in which the proposer of the scheme concurs, your Committee would recommend that the scheme be approved by the Board.

All of which is respectfully submitted,

WM. OLDRIGHT.
J. GALBRAITH.

3rd December, 1886.

Brockville Sewerage.

To the Chairman and Members of the Provincial Board of Health:

Gentlemen,—With regard to the accompanying proposed scheme for the sewerage of the Town of Brockville, submitted to your Committee on Sewerage, Drainage, and Water Supply, your Committee beg leave to report that they were doubtful from the information furnished whether the proposed point of discharge of the sewage was such that there would be no danger of any of the sewage being carried to the inlet pipe of the water works. Your Committee was of opinion that there had not been sufficient experiments and observation to determine this question.

Shortly after the first meeting of your Committee to consider the scheme, and quite independently of any knowledge of the doubts of your Committee, similar doubts were strongly expressed at a public meeting of the citizens of Brockville. Shortly after this Professor Galbraith was called upon in his professional capacity to prepare a scheme for an intercepting sewer with an outlet below the water works intake. He worked out the details of a scheme for delivering the sewage at a point in the river 1,000 feet down stream from the mouth of the inlet-pipe of the water works. This point seemed to him to be as far as he could safely carry the pipe with the grades that the ground allowed, but he reported that even this point of outfall was not to be adopted until further float experiments should prove it to be perfectly safe. The determination of the motions of the currents at the selected point of discharge must, of course, rest with the municipal authorities. The Provincial Board cannot be expected to make the necessary experiments and observations with the resources at its command; but it should, in the opinion of your Committee, withold its approval of either scheme till the necessary information is obtained to render it a matter of certainty that there are no currents from the end of the discharge pipe of the sewer system to the inlet pipe of the water works.

All of which is respectfully submitted,

J. GALBRAITH,
WM. OLDRIGHT.

3rd December, 1886.

Toronto Sewerage.

To the Chairman and Members of the Provincial Board of Health:

Your Committee on Sewerage, Drainage and Water Supply, beg to report as follows on the proposed scheme for a system of intercepting sewers for the City of Toronto, submitted for the approval of the Board by the Mayor. The principal points which demand consideration are: 1st. The quantities and distribution of the sewage and surface water (including in the latter the flow of several creeks) to be disposed of. 2nd. The location, sizes, and inclinations of the requisite intercepting sewers. 3rd. The question whether pumping will be necessary in order to get the requisite fall; and 4th, the point of discharge into the lake.

The first three points involve a large amount of engineering work which your Committee do not propose to discuss. They have therefore confined themselves to the consideration of the point of discharge alone.

Mr. Alan Macdougall, C.E., made float experiments in May and June, 1886, for the purpose of getting information respecting the currents in the harbour, on the south side of the island and between the east gap and Victoria Park. These experiments were made on 22 days in May, and on 13 days in June. The prevailing winds were westerly and northerly, although there were winds from all points of the compass. More than one

hundred float experiments were made at various depths from the surface to 22 feet below. A few floats were tried at a depth of 40 feet.

Speaking generally, about half the number of floats went easterly, and the remainder westerly. Of the floats set out south of the island, more went westerly than easterly, and of those set out opposite Victoria Park more went easterly than westerly. Mr. Rust in 1884, made float experiments opposite Victoria Park, between September 25th and October 19th, and came to the conclusion that the currents were principally due to the prevailing winds.

With so little knowledge, then, of the direction and action of currents between the proposed outlet and the in-take pipe of the water works, it would not, in the judgment of your Committee, be advisable to pour out so large an amount of filth at the former point. From a population of 300,000 people the amount of fæcal solids would be from 23 to 28 tons per *diem*, (according to the calculations of different physiologists), and 78,000 gallons of urine. And it is well-known that the excreta form but a small percentage of the total filth entering the sewers and composing the sewage of a city. Calculating from page 15 of the report, the proportionate amount of sewage per *diem* for 300,000 would be 22,600,000 gallons per *diem*; but even calculated as in cities of Great Britain as 25 gallons per head, this would give $7\frac{1}{2}$ million gallons of concentrated sewage, and adding an equal amount for street washings, we would have 15,000,000 gallons yielding from 60 to 90 tons of solid organic matter.

It must be apparent to you that we should not pour out such a volume of filth into the bay without knowing whether or not some of it may flow towards the source of our water supply. If this should turn out to be the case, the constant effect on health must be bad, and in time of epidemics, such as typhoid fever, or the importation of a very small amount of cholera, the result might be disastrous in the extreme. Another way of putting the matter is to ask if the citizens would like to see the present filthy water front, as now seen at the ends of our slips, transferred to the neighbourhood of the eastern gap, or of Ashbridge's Bay, without being assured that there is no westward current from these points to the inlet crib.

The suggestion in the report that if the proposed outlet be found not suitable, an outlet might be made a mile or more to the eastward, indicates a doubt on the part of the framers which, we think, should be allowed full weight. In this connection it might be pointed out that such an extension would be all under the lake level, and that the additional head necessary to produce a cleansing current through the pipe can scarcely be spared, if at all, from the present low head. As above indicated, we do not propose to discuss the point whether gravitation will produce a sufficient current at all times if the outlet be placed as proposed, but it seems apparent that the head is small enough without being diminished by a further extension of the pipe a mile or two. Should this prove, on examination, to be the case, pumping would have to be resorted to.

The only conclusion that your Committee can come to under the circumstances is that there is not yet sufficient experimental evidence to justify the fixing of the outlet at the point proposed in the Engineers' report. They would advise, therefore, that only such work be commenced and carried on immediately as would be unaffected in any way, either by the position of the outlet or by the introduction of pumping, and that systematic float experiments be carried on for at least one whole season, or longer if necessary—in fact long enough to render it a matter beyond reasonable doubt that the drinking water is in no danger of contamination. There can be no doubt of the necessity for the immediate construction of intercepting sewers, but the matter is of too great importance to allow any mistakes to be made which might be avoided by making further experiments.

All of which is respectfully submitted,

WM. OLDRIGHT,
J. GALBRAITH.

Toronto, 4th October, 1886.

Cornwall Sewerage.

To the Chairman and Members of the Provincial Board of Health:

Gentlemen,—Your Committee on Sewerage, Drainage and Water Supply, begs leave to report that it has examined the plans and specifications for the proposed water supply of the town of Cornwall, and recommends the same for the approval of the Board.

We would point out that the introduction of this scheme may necessitate extensive improvements in the system of sewerage.

Your Committee has not, however, been called upon to report on the sewerage of the town; nor have any details thereof been laid before us. We therefore merely desire to draw the attention of the Board and through it, if thought advisable, of the municipal authorities of Cornwall to this probable necessity.

All which is respectfully submitted.

WM. OLDRIGHT,
Chairman of Committee.

Toronto, August 31st, 1886.

REPORT OF THE COMMITTEE ON POISONS *RE* ILLUMINATING GAS.

Mr. Chairman, and Gentlemen:

The increasing frequency with which cases of poisoning by illuminating gas have occurred of late years, has become a matter for serious consideration by those who are more particularly concerned with matters pertaining to the public health, and whose duty it is in this connection to point out ways and means by which such occurrences may be reduced to a minimum.

Illuminating gas, as ordinarily supplied to consumers, is poisonous, whether it be coal gas, derived from the destructive distillation of coal, or water gas, derived from the decomposition of superheated steam by passage over red hot coal or coke and subsequent charging with the vapour of hydrocarbons. It is not a single gas, but always a mixture of several gases. In the consideration of the composition and poisonous effects of illuminating gas, the mixture known as coal gas will be compared with that known as water gas. The composition of these mixtures is not by any means always the same, but varies somewhat from time to time, even in the same kind of gas made in the same place, and much more considerably in the same kind of gas made in different places and by different methods. These variations of composition are, however, not so great as to prevent the term "coal gas" or "water gas" from representing a tolerably definite mixture. According to the report of the State Inspector of gas and gas meters for the State of Massachusetts, for the year 1884, the composition of a number of specimens of *coal gas* from different towns and cities in that state was found to be as follows:—

	Varying from	To	Average
Illuminants	4.56	8.03	6.19
Marsh gas	33.53	41.98	37.41
Hydrogen	39.53	52.12	46.38
Carbon monoxide	3.19	6.74	5.33
Nitrogen	0.85	9.66	3.72
Oxygen	0.00	1.84	0.25
Carbon dioxide	0.00	1.78	0.52

The same authority gives the composition of *water gas* in the various places as follows:—

	Varying from	To	Average
Illuminants	10.12	17.81	12.48
Marsh-gas	13.58	26.51	20.55
Hydrogen	27.77	43.99	36.34
Carbon monoxide	24.47	31.52	27.46
Nitrogen	0.92	5.72	2.56
Oxygen	0.00	.95	.26
Carbon dioxide	0.00	1.17	.35

Prof. Henry Wurtz, Ph.D., gives the following analysis of the water gas supplied by the Municipal Gas Light Company of New York:—

Hydrogen	38.05
Marsh-gas	11.85
Carbon monoxide	29.40
Carbon dioxide	0.10
Oxygen	0.10
Nitrogen	3.71
Olefines (vap)	9.29
Paraffines	7.50

The following is the composition of the Lowe water gas at Baltimore, by Dr. E. G. Love, Official Gas Examiner of New York city:—

Hydrogen		46.49
Marsh-gas		11.75
Carbon monoxide		21.51
Nitrogen		4.30
Oxygen		0.20
Olefine gases	Ethylene	6.50
	Propylene	.35
	Butylene	.15
Paraffin gases	Ethane	.50
	Propane	1.00
	Butane	7.25
		100.00

Mr. N. Aubin, Dominion Gas Engineer, in his report to E. Miall, Esq., Commissioner of Inland Revenue, gives the following analysis of Toronto gas by Prof. Pike in 1880:—

Hydrocarbons	9.22 per cent.
Marsh-gas (C.H.)	25.71 "
Carbon monoxide	21.50 "
Hydrogen	43.57 "
	100.00 per cent.

and the same gentleman quotes in the same report an extract from a report on gas in England, showing that coal gas, as found there, consisted of the following substances:—

Marsh-gas	30 to 40 per cent.
Hydrogen	50 "
Carbon monoxide	5 to 10 "
Hydrocarbons	5 to 6 "

All the constituents of illuminating gas, except oxygen, are irrespirable, that is, they cannot supply the place of oxygen for breathing purposes, and, if breathed undiluted, will produce death from suffocation. Besides this negative power, which it shares with the other constituents of illuminating gas, carbonic oxide is conspicuous for poisonous properties, which are peculiarly its own. It is probable that it is the only essentially poisonous substance in coal gas and water gas.

Mr. Aubin, Dominion Gas Inspector, says: "The particular compound, to which may be attributed the deaths caused, by the accidental escape of gas in bedrooms is the carbonic oxide found in coal gas, but in larger quantities in water gas."

Of the poisonous nature of this gas there can be no question—chemists of the earlier, as well as the more recent periods have united in pronouncing it one of the most poisonous of gaseous products. Dr. Parkes, in his work on Hygiene, says: "Of the immense effect of carbon monoxide, *there is no doubt*. Less than one-half per cent. has produced poisonous symptoms, and more than one per cent. is rapidly fatal to animals."

Prof. Witthaus, in his work on General Medical Chemistry, says: "Carbon monoxide is an exceedingly poisonous gas, and is the chief *toxic constituent* of the gases given off by blast furnaces, from defective flues and open coal or charcoal fires, and of illuminating gas. An atmosphere containing but a small proportion of this gas produces asphyxia and death, even if the quantity of oxygen present be equal to or even greater than that normally existing in the atmosphere; 0.5 per cent. of carbon monoxide in air is sufficient to kill a small bird in a few moments and *one per cent.* proves fatal to small mammals."

Replies to Circulars, etc.—For the purpose of obtaining more definite information relative to the actual effects of illuminating gas upon the life of human beings exposed to it, a circular of inquiry was addressed by the State Board of Massachusetts to the health authorities of 216 cities and towns in the United States, having a population of more than *ten thousand*. Returns were received from 108 cities, from which it appears that 189 deaths have been recorded as due to the inhalation of illuminating gas, in the twenty years and six months included in the returns. Of these 189 deaths, 40 are recorded as due to coal gas, in the 20½ years of record; 45 as due to *water gas*, in the 7½ years of record, since its introduction, and *one* to a mixture of coal and water gas, leaving 103 in which the noxious cause was not specified.

It also appears, that in three large cities in which water gas has been introduced, viz.: New York, Baltimore and Brooklyn, with a population of over 2,000,000, there had been sixteen deaths from the inhalation of illuminating gas previous to the introduction of water gas, in a period of thirteen years, or 1.2 per year.

In the same cities, for the remaining 7½ years after the introduction of *water gas*, there were 120 deaths, due to inhalation of illuminating gas or 16 per year—an increase of more than 12 fold in the deaths, from this cause, while the population had not doubled in the same period. To carry the comparison still further, the two cities, Boston and Baltimore, are quite similar in the number of their population (400,000).

In Boston there have been but *four* deaths attributable to illuminating gas in 20 years; in Baltimore, in the same period, there have been 19 deaths from the same cause, 17 of which have occurred in 1883, 1884 and 1885. The former city uses coal gas for illumination, and the latter water gas.

The consumption of coal gas in England is very large. Mulhall's Dictionary of Statistics gives 71,600,000,000 cubic feet as the consumption for 1880—or 3,400 cubic feet for each inhabitant. Notwithstanding this enormous consumption, the death rate from gas poisoning was small. The population of England and Wales is estimated for 1883 at 26,770,743, and during the five years from 1879 to 1883 inclusive, only 24 deaths occurred from this cause.

A strong contrast to these figures are the results found in Brooklyn, Baltimore and New York, where water gas has been introduced. The population of these three cities was, in 1880, 2,105,469, and out of this number, which is less than 1.12 of the population of England and Wales, there occurred during the same period and from the same cause 77 deaths.

Symptoms of Poisoning.—The subjective symptoms of poisoning by carbon monoxide are said to be quite uniform. The first symptom noticeable is a burning feeling in the skin of the face; this is quickly followed by giddiness and headache, gradually becoming more intense, with a feeling of strong pulsation in the temporal arteries. In the early stage there is generally oppression at the stomach, nausea and vomiting, noises in the ears, imperfect vision, distress of mind, anxiety and excitement, and at this stage insensibility often attacks the victim, who falls to the floor unconscious of standing or attempting to walk.

In cases of recovery, the most marked symptom is a feeling of weakness and fatigue, often lasting for several days; headache, a want of clear conception, and general obscurity of the mental faculties are also noticed.

In cases which end fatally, the victims either never wake from coma, or their wakening is transitory and imperfect.

The objective phenomena are mainly as follows:—In the early stages, the external surface of the body is congested and red, especially the face. The conjunctivæ are injected, and the mucous membranes are usually of a bright red. In the later, comatose stage, the skin is usually pale, and becomes livid toward the end of life.

Death usually occurs without perceptible spasms or convulsions, although convulsions do occasionally take place.

It appears from the experiments of Bernard and others, that the method by which carbon monoxide produces its fatal effects is by forming with the colouring matter of the blood, by displacing oxygen, a compound, which is quite stable, and thus causing asphyxia, by destroying the power of the blood-corpuscles of carrying oxygen from the air to the tissues. Owing to the stability of this compound, the symptoms of this form of poisoning are very persistent, lasting until the place of the colouring matter, thus rendered useless, is supplied by new formation.

The prognosis is very unfavourable, when the amount of gas inhaled has been at all considerable; the treatment usually followed, artificial respiration and inhalation of oxygen, failing to restore the altered colouring matter.

If we compare the analyses of coal and water gas, made by the Massachusetts Inspector of Gas, etc., it will be seen that water gas contains about five times as much carbon monoxide as coal gas; and, as carbon monoxide is by far the most poisonous ingredient in these illuminating gases, we must conclude that the one containing the larger proportion of it would be more poisonous and dangerous to life than the other. The following experiments, made by the Massachusetts State Board of Health, of which Dr. S. W. Abbott is the medical health officer, show that this opinion is correct.

Experiment No. 1.—Two rooms were made exactly alike, with a capacity of about 700 cubic feet; three dogs, two cats and two rabbits were placed in one room where water gas, containing about thirty per cent. of carbon monoxide, was allowed to flow in from a single, ordinary burner, at the rate of six feet per hour. The experiment began at 11.15 a.m., and at 12.45 p.m. vomiting, delirium, convulsions, etc., had already been noted. Half an hour later all the animals were unconscious, or apparently so, failing to respond to calls and vigorous knocks upon the walls. At 2.30 p.m., or three hours from the start, the two cats were dead and the other animals were prone and quite unconscious. The dogs died at 3, 4. and 6.30 o'clock respectively; the rabbits also at 6.30. In a word, symptoms of poisoning were well developed in one hour and a half; deaths began to occur in a little more than three hours, and all were dead within eight.

Experiment No. 2.—In the corresponding experiment with coal gas, containing about eight per cent, of carbon monoxide, two dogs, two cats, two rabbits and two pigeons were placed in the room, and the gas was introduced from an ordinary burner, and at the same rate as before. The experiment began at eight a.m., and for three and a-half hours no symptoms of consequence were observed, and then only drowsiness and general anxiety with salivation in one case. At four p.m., eight hours after the start, (at the end of which time all the animals mentioned in the first experiment, were dead) nothing more than a gradual exaggeration of the symptoms had occurred. Recovery apparently would have been still

possible and even easy at this time. After twenty-four hours one cat and one rabbit were dead, but the rest, though stupefied, were not unconscious, being still responsive to knocks and calls. There is little doubt, moreover, that as the night was extremely cold (below 0° F.) and the rabbit was young, it was somewhat chilled by the cold, and thus succumbed the more readily to the gases.

In a room containing 800 cubic feet capacity, which is about the average size of rooms in which fatal results have taken place, a six foot burner (*i.e.* allowing the escape of six cubic feet per hour), would introduce in eight hours forty-eight cubic feet, a little more than six per cent. of the air of the room. By careful experiment it is proved that at least more than half of this amount escapes, leaving less than three per cent. in the room at the end of eight hours. Of this amount, say three per cent. in the case of coal gas, from five to eight hundredths would be carbonic oxide, or from fifteen to twenty-five hundredths of one per cent. of the air of the room, an amount sufficient to produce headache, nausea, malaise and other symptoms of a like nature, but very rarely a fatal result.

In the case of water-gas escaping at the same rate and filling a similar room to the amount of three per cent., at the end of eight hours from seventy-five to eighty-five hundredths would be carbonic oxide, or nearly one per cent. of the air in the room, an amount which is inevitably fatal to healthy adults after an exposure of from four to twelve hours.

It appears from these observations, as to cases which have occurred, and also from the experiments of the Board, that in ordinary cases an exposure to coal-gas would produce during a night's sojourn in a small room such as has been described, severe and unpleasant symptoms and possibly insensibility, with a probability of resuscitation and complete recovery.

An exposure to water-gas under similar conditions would usually be followed by death in less than eight hours.

The remedies suggested for the prevention of accidents are:—(1) The use of automatic burners which would cause the gas to ignite immediately on escaping. (2) Limiting the minimum size of sleeping apartments and requiring thorough ventilation.

In view of the experimental evidence herewith submitted, it must be admitted by all that water-gas with its twenty-five per cent. of carbonic oxide, is a more dangerous substance than coal gas, with its six or seven per cent., and the question would naturally arise as to how much practical importance may be attached to this more poisonous character. If we consider the various circumstances under which accidents are likely to occur as a result of the general distribution of gas for illuminating purposes, it will help to answer this question.

There are several principal ways in which such accidents are likely to arise.

1. By suffocation: as when workmen are overpowered in deep trenches by large quantities of gas escaping from broken or leaky mains;

2. By the formation of explosive mixtures with air, owing to the escape of the gas in any manner;

3. By poisoning during sleep: from the escape into the sleeping room of gas from the burner because, owing to defective fixtures, to accident, intention, or ignorance, the light has been put out while the gas is still allowed to flow in;

4. By the slow, obscure poisoning, especially of feeble or anæmic persons, owing to leaks in or about pipes or burners in ordinary dwelling-rooms;

5. By poisoning, especially at night, when doors and windows are generally closed, with gas escaping from broken street mains into the earth, afterwards passing through drains or through the soil to the basements of dwellings and thence upwards throughout the house.

Stoves, etc.—A fruitful source of carbon monoxide poisoning, sometimes fatal, but more frequently producing languor, headache, and debility, is to be found in the stoves, furnaces, etc., used in heating our dwellings and other buildings, especially when the fuel is anthracite

coal. This fuel produces in its combustion, when the air supply is not abundant, considerable quantities of carbon monoxide, to which a further addition may be made by the reduction of the dioxide, also formed in passing over red hot iron. This poisonous gas may find its way into rooms either through cracks and defects in the stoves, flues, or pipes, by occasional downward currents of air passing over fires in open fireplaces, or, much more frequently, by direct passage through the heated metal. Experiment has shown that metals, notably cast-iron, are quite pervious to gases when heated to redness. When, therefore, a stove or the fire-box of a hot-air furnace becomes red-hot, a portion of the gases formed by the combustion of the fuel, passes through the pores of the metal to contaminate the air without, and give rise to carbonic oxide poisoning to a degree depending upon the degree of imperfection of the ventilation, the nature of the fuel and the amount of air supplied to it.

The obvious precautions required to avoid this form of what may be called chronic carbonic oxide poisoning, and which is by no means uncommon, are:—

1. To see that the various pieces of which the stove or furnace is composed are well fitted and properly cemented, so as to insure as close a joint as possible;

2. To have the stoves or furnaces lined with fire-clay or fire-brick, which tends to prevent their being over-heated, and thus diminish their perviousness to gases ;

3. To avoid heating to redness ;

4. To have good pipes, well fitted, and entering a flue with a good draught ;

5. To furnish a plentiful supply of air to the fuel ;

6. To secure proper ventilation;

7. In the case of hot-air furnaces, to obtain, by an abundant supply of external air to the air chamber, a large supply of moderately-heated air, rather than a smaller supply of very hot air ;

8. To avoid placing dampers or other obstructions in the pipes leading from all stoves in which anthracite coal is used as fuel.

Note re Automatic Cut-off Gas-burner.—The automatic cut-off gas-burner, a sample of which was exhibited to the Board yesterday, might be used with advantage, more particularly in bedrooms, so as to prevent the danger of suffocation from inhaling illuminating gas.

It consists of two steel cylinders inclosed in a brass case, which can be screwed on to any ordinary gas fixture.

The outside cylinder, open at the upper end and closed at the lower, has a flange or valve seat at its upper end, which is perforated by two small lateral openings. It also contains in its lower end a short centre post. The inner cylinder, which is made to move easily inside the outer one, is open at its lower end and closed at its upper. It has a flange or valve at its upper end, which fits evenly over the valve seat in the outer cylinder. A weight is in some instances made to press on this flange.

On the outside case is a Bunsen air burner with a spring valve, which, when pressed inwards, uncovers a small opening in the case.

Quicksilver is poured into the outer cylinder as high as the centre post, *i.e.*, one-third its height ; atmospheric air fills the other two-thirds. The inner cylinder, which is closed at the upper end, is then pressed into the outer one, and thereby encloses atmospheric air to the extent of two-thirds its capacity, the air being retained in position by the quicksilver.

The *modus operandi* may be thus described :—

Pressure on the spring valve allows a small quantity of gas to escape at the side opening in the brass tube. On lighting this gas at the Bunsen burner, it burns with a bluish flame, and heats the air in the inner cylinder ; the air expands, and in doing so, elevates the internal cylinder, thereby exposing the two openings in the shoulder of the outside cylinder. Gas then flows upwards through these openings, and escaping at the

op is lighted by the flame from the Bunsen burner. Pressure should then be removed from the spring valve. The whole operation does not last more than three or four seconds. When the light is blown out, the air in the inner cylinder cooling, contracts in volume, and lets the inner cylinder drop over the holes in the valve seat of the outer cylinder, thus preventing further escape of gas. Gas ceases to escape at the top in from two to three minutes.

Your Committee desire to express the opinion that the automatic cut-off gas-burner would be of great utility in preventing the fatal results which occasionally occur from the inhalation of any kind of illuminating gas.

All of which is respectfully submitted.

J. J. CASSIDY.
FRANCIS RAE.

Toronto, May 20th, 1886.

REPORT OF THE DELEGATE TO THE CANADIAN MEDICAL ASSOCIATION.

Toronto, October 11th, 1886.

To the Chairman and Members of the Provincial Board of Health:

Gentlemen,—I have much pleasure in submitting a report of what was done in public health matters at the last annual meeting of the Canadian Medical Association, which took place in the city of Quebec.

The Association was convened in one of the lecture rooms of Laval University at 10 a.m., August 18th, the President, Dr. T. K. Holmes, of Chatham, in the chair, and Dr. James Bell, of Montreal, acting as Secretary. The other officers present were:—Dr. Charles Sheard, of Toronto, Treasurer; Dr. Sloan, of Blyth, Vice-President for Ontario, and Dr. Lehman, Local Secretary for New Brunswick.

In addition to the above the following members of the Association amongst others attended the meetings:—Dr. Russell, Quebec; Dr. Ahern, do.; Dr. J. E. Graham, Toronto; Dr. Chas. O'Reilly, do.; Dr. McFarlane, do.; Dr. Daniel Clark, do.; Dr. Carson, do.; Dr. Canniff, do.; Dr. Machell, do.; Dr. Theodore Covernton, do.; Dr. R. A. Reeve, do.; Dr. Cassidy, do.; Dr. Howard, Montreal; Dr. E. Desjardins, do.; Dr. Roger, do.; Dr. Shepherd, do.; Dr. Geo. Ross, do.; Dr. Fenwick, do.; Dr. Campbell, do.; Dr. Taschereau, do.; Dr. A. L. Smith, do.; Dr. LaChapelle, do.; Dr. Trenholme, do.; Hon. Dr. Sullivan, Kingston; Dr. Dupuis, do.; Dr. Kerr, Winnipeg; Dr. Jasken, do.; Dr. Eccles, London; Dr. Gardiner, do.; Dr. Jenner, Picton, Ont.; Dr. Gerald O'Reilly, Fergus; Dr. Macdonald, Wingham; Dr. Smith, Seaforth, Dr. Sherman, Ogdensburg; Dr. Carrier, Detroit; Dr. Latarte, do; Dr. Imrie, do.; Dr. Foster, Portland; Dr. Playter, Ottawa; Dr. Broughton, New York. Mr. Boxer, Secretary of the Provincial Board of Health, Quebec, was also present during the meetings.

After routine business, a number of new members were elected and reports were called for, received and read upon the following subjects:—On Necrology, Education, Ethics, Publication, Practice of Medicine, Surgery, Obstetrics, Climatology and Public Health. After the report of the Committee on Obstetrics was read your delegate, in the absence of a report from the Committe on Public Health, laid before the meeting a letter from Dr. Yeomans, chairman of that committee, desiring Dr. Cassidy to discuss some portions of the supplementary quarantine regulations issued for the Dominion, August 3rd, 1886.

Your delegate expressed satisfaction with these regulations and offered the opinion that they were calculated to do great good in forwarding the health interests of the country, and if properly carried out were likely to give satisfaction not only to the Provinces of the Dominion, but also to the State Health Boards of the neighbouring republic. Referring to Section 4 of the supplementary quarantine regulations, which provides for cases

of cholera, he stated that he did not deem the precautions sufficient and offered the following substitute, viz.: "Should cholera break out on any ship, the quarantine officer should, beside the exercise of the precautions taken in the instance of smallpox and other infectious diseases, remove all passengers from the ship at Grosse Isle, detain them till the period of incubation from the date of the outbreak of the last case has elapsed, and also disinfect to his own satisfaction all their personal effects and luggage, as also the vessel and cargo, before allowing either the vessel, passengers or their luggage to proceed to port." (Vide Sec. C, page 18, Report on the Quarantine System of the St. Lawrence, approved and adopted by the Provincial Board of Health of Ontario, 1886).

Referring to the inspection of steamships and sailing vessels at Quebec (Sec. 10 of Regulations), your delegate suggested that the port physician should, prior to inspection, be requested to ask for clearance papers from Rimouski or Grosse Isle.

Section 19 provides that every master of a steam or sailing vessel shall be liable to a penalty not exceeding $400, or to imprisonment until such penalty be paid for any contravention of the regulations, etc., etc.

Instead of $400, your delegate suggested a much larger sum, and thought $3,000 a proper amount, with imprisonment for the second offence.

Your delegate again referred in terms of praise to the generally excellent character of the quarantine regulations, and expressed the hope that the proper authorities might at some early day improve them by incorporating with them the amendments suggested above.

It was then moved by Dr. Eccles, of London, seconded by Dr. Daniel Clark, of Toronto, "That the Canadian Medical Association, at its annual meeting, convened at Quebec, views with pleasure the action taken by the Dominion Government, in the issue of the quarantine regulations, which have been put in force during the present month. We consider the prompt and thorough enforcement of the aforesaid regulations will be of incalculable benefit to the health interests of the country, and moreover it is our opinion that when 'intelligently applied' they are calculated to conserve the best interests of the trade and commerce of the Dominion."

At the general meeting on the second day, Dr. Canniff, Medical Health Officer, of Toronto, who had been absent, wished, by privilege, to say a few words upon the question of quarantine, which had been introduced by your delegate on the previous day. He stated that if infected persons pass through Quebec in a stage of incubation, from its position the city of Toronto would be specially exposed therefrom. He thought the resolution passed yesterday might go further and recommended to the Government the appointment of some medical man whose duty it should be to specially watch and keep track of all persons, who have been discharged from an infected vessel in quarantine. This would not involve a very large expenditure and might be the means of securing the safety of the Province of Ontario.

Dr. Fenwick, of Montreal, said that he had recently had a letter from the Minister of Agriculture, stating that no further appointment could possibly be made in the city of Montreal; that the Government considered that they had a sufficient establishment at Rimouski, at Grosse Isle, and at Quebec, and had determined against further increasing their staff. Dr. Fenwick himself did not think it necessary.

The discussion then dropped.

I may also mention that at the afternoon meeting on the first day, a paper was read by Dr. Playter, of Ottawa, "On the value of mortuary and other health statistics."

During the afternoon session on the second day of meeting, the following resolution by Dr. Playter was passed unanimously by the Association:—

"That the following be a special committee of this Association to consider the question of a system of vital statistics for the Dominion and to urge upon the Federal Government the advisability of making provision at an early day for obtaining full returns of births, marriages and deaths throughout the different provinces of the Dominion, namely: Hon. M. Sullivan, Kingston; Drs. F. H. Campbell and Larocque, of Montreal: Daniel Clark (P.L.A.) and Canniff, of Toronto; Ahern, of Quebec; and Grant and Playter, of Ottawa."

Nothing further of interest in Public Health matters transpired during the meetings.

Before the conclusion of the afternoon session on Thursday, votes of thanks were given to the authorities of Laval University for the use of the building, and to the railroad and steamboat companies for the courtesy shown by them to the Association.

The Association then adjourned.

Owing to valuable information obtained from various sources I may inform the Board, that if a system of quarantine inspection, efficient and yet not vexatious, is to be carried out at Grosse Isle, three things will be necessary. In the first place, a wharf, extending into deep water, will have to be constructed at the Grosse Isle quarantine station; in the second place the inspection of incoming ocean vessels, which do not carry the mails, equally with those which do carry them, will have to be made at whatever time in the twenty-four hours they arrive at the quarantine station; in the third place the inspecting staff at Grosse Isle will have to be doubled, one set of officials attending to the work of inspection between the hours of sunrise and sunset and another during the other hours of the day.

In the absence of any such convenience at present, the construction of a wharf extending into deep water at the Grosse Isle station is necessary, in order to enable ocean vessels to come alongside to be inspected, and subsequently subjected to whatever procedures the exigencies of the case and the quarantine regulations may call for, with the shortest possible detention.

If the inspection of *all* vessels were made as soon as they arrive at Grosse Isle, they would be enabled to proceed at once, if permitted, to the ports of Quebec or Montreal, and thus save many hours of valuable time which would otherwise be lost, while waiting for the visit of the inspecting officer, or while subsequently waiting for a favourable tide to enable them to overcome the difficulties of navigation in the St. Lawrence river, at Cap des Roches.

In explanation of this last observation I may say that vessels of large draught cannot pass Cap des Roches unless at high tide, and a detention of a few hours at Grosse Isle may compel them to wait for twenty-four hours or more in the stream in order to get a favourable tide.

In defence of the view here expressed it may be contended that the difficulties of navigation in the St. Lawrence, as compared with ocean ports, such as New York, seem to call for a special system of quarantine inspection if Canadian vessels are not to be put to a great disadvantage in the point of rapidity of transit, as compared with thei American rivals.

If this plan should be favourably entertained by the Dominion Government, it would be necessary to double the inspecting staff at Grosse Isle.

The construction of a wharf and the increase of the staff at Grosse Isle need not necessarily entail a large expenditure; and if carried out they would certainly enable Canadian steamship companies to submit their vessels to a satisfactory quarantine inspection without interfering with that rapidity of transit from port to port, which is every day becoming a more marked feature of ocean travel.

All of which is respectfully submitted.

J. J. CASSIDY

REPORT OF AN INVESTIGATION re NUISANCE FROM STARCH FACTORY, AT BRANTFORD.

To the Chairman and Members of Provincial Board of Health.

GENTLEMEN,—Having been communicated with by the Local Board of Health of Brantford township, and by the Medical Health Officer of Brantford, on several occasions regarding a nuisance arising from the starch factory, situated on the canal below the

city, and within the limits of the township, I made an inspection of the premises on July 2nd, and found the following condition of affairs :—

1. *The nature of the industry.* When running on full time the factory utilizes daily some 150 bushels of Indian corn, and forty or fifty bushels of rice, grinding them and extracting for commercial purposes their starchy products. Roughly, the process consists in softening the grain with water for a day or two while in a reservoir or hopper in the upper storey of the building. Then after grinding it, and allowing a watery solution of the ground grain to pass upon canvas cloth sieves, through which the starch and a certain amount of gluten are carried in suspension, the bran and other insoluble matters are carried over on the canvas sieves, and deposited in the refuse room.

The starch solution is then treated in large, shallow pans, lined with tinned or galvanized iron, with soda ley. By this treatment the starch is clarified to some extent, and is allowed to settle in the vats, remaining there some twenty-four hours or more. The supernatant alkaline liquid is then run off, and the starch is removed from the pans, and put into large vats where clean water is run in, and the starch stirred up and allowed to settle again ; fresh water is added for several successive days, all albumenoid and other materials thereby being removed. The process is then completed, except the pressing, drying and packing.

From a bushel of corn some twenty-five pounds of ordinary corn starch are produced and proportionately of the rice.

2. *Ley-Products and Refuse.* It is readily seen, from the nature of the material used, that with a little care the manufacture of starch can be readily carried on without any nuisance ; but should the prompt removal of the moist albumenoid materials be neglected, a source of serious nuisance may readily be created.

The husks of the grain, or its bran, are, as already said, carried over from the canvas screens to a refuse-room in a moist condition. This material has hitherto been disposed of to the dairymen, who haul it to their cow sheds in the surrounding country and suburbs, for feeding cows, the milk from which is largely sold in the city for household use. Should this moist food be regularly removed, and fed while fresh, little objection, I imagine, could be taken to its use ; but bad weather, roads and other circumstances make its removal irregular, and in consequence putrefaction and fermentation of the nitrogenous and starchy materials is set up, producing smells of a most disagreeable character on the premises, and which too are given off from the decomposing materials while hauled along the roads. Dr. Griffin, Medical Health Officer, has prohibited entirely the use of this fermenting food for milch cows during the warm season.

The other and more widespread nuisance, arises from the supernatant alkaline liquors run off from the shallow vats in which the starch solution is treated. The glutinous portion of this liquor while in the vats, will often have undergone along with a certain amount of the starch water, a certain degree of fermentation ; but the solution after being drawn off from the vats is run into a creek or old water-course, whose waters have been cut off by the canal, and during the present season, owing to there being no water for flushing this creek in consequence of the large dam at the head of the canal having boen carried away by the spring floods, the alkaline refuse liquors trickle along the tortuous course of the creek for nearly three-quarters of a mile ; the shallow water is rapidly evaporated and deposits its decomposing organic matter along the banks of the creek, creating in the neighborhood, and especially at the Mohawk Institute, through the grounds of which the creek runs, a nuisance of the most disagreeable and injurious character.

The remedies for this state of affairs are readily understood, and can very readily be carried into effect.

3. *Disposal of the Bran, and other By-Products of the Grinding.* What is required is its daily removal in warm weather or at a time before decomposition has begun in it, or better, the rapid drying out of the product and subsequent grinding as is being proposed by the firm. Should this latter method be introduced, the complete removal of the nuisance from this cause will result.

4. *Treatment of the Alkaline Waste Liquors.* The present condition of affairs cannot be tolerated, although the stoppage of the manufacture during the warm weather, as is being done to some extent, will help to lessen the difficulty.

When the water is again turned into the canal, frequent flushing of the creek, if the canal has sufficient water to spare, will likewise dilute the waste in its course to the Grand river.

A more thorough provision in the shape of a covered tile drain ought, however, to be made, by which the fluids could be rapidly and without local nuisance carried into the river.

Whether the question of alkaline pollution of the Grand river at this point has or is likely to become a serious matter as regards the fish, or its use by cattle of the farms farther down, is another question which might very properly be considered.

Respectfully submitted,

P. H. BRYCE,
Secretary.

SUMMARY OF MINUTES—PROCEEDINGS OF THE BOARD FOR 1886.

Special Meeting.

January 14th, 1886.

The Board met at 3 p. m., there being present :—

Dr. Covernton, Dr. Cassidy, Dr. Oldright and Dr. Bryce.

Communications were read *re* the necessity of appointing Medical Health Officers in various places, owing to the presence of, or danger from small-pox in them. It was thereafter moved by Dr. Oldright, seconded by Dr. Cassidy, and carried : That inasmuch as notice has been given to the Councils of the Village of Arnprior, and of the Townships of McNab, Admaston, Horton and Bagot, according to the terms of the Public Health Act, 1884, to appoint Medical Health Officers for their respective municipalities ; and inasmuch as notices of such appointment having been made, have not been received by this Board,—be it therefore resolved that the following gentlemen be recommended by the Board to the Lieutenant-Governor for appointment as Medical Health Officers.

Dr. O'Brien, (Renfrew village).....for Township of Bagot.
Dr. Mann, " ..... " Townships of Admaston and Horton.
Dr. Cranston, (Arnprior village)..... " Township of McNab and Arnprior village.

The Board then adjourned.

CHAS. W. COVERNTON,
Chairman.

First Quarterly Meeting.

(First Session.)

February 2nd, 1886.

The Board met at 2.30 p. m., there being present :—

Dr. Covernton, Chairman ; Dr. Cassidy, Dr. Yeomans, Dr. Rae, Dr. Oldright and Dr. Bryce.

The minutes of several previous meetings were read, and on motion of Dr. Bryce seconded by Dr. Cassidy, were adopted.

Dr. Covernton read a brief paper summarizing work done at the Washington meeting of the American Public Health Association. He also referred to a communication from Mr. Boxer, regarding the matter of a Provincial Board to be formed in Quebec.

The following resolution was then carried, respecting the inspecting staff at Montreal.

Moved by Dr. Yeomans, seconded by Dr. Cassidy : That owning to the reports from Montreal and the Province of Quebec, received for the week ending January 30th, showing continued presence in that city and province of a considerable number of cases of smallpox, two inspectors be continued to do duty on the two railway lines running west from Montreal.

Professor Galbraith here took his seat at the Board.

Dr. Bryce read a communication from Dr. Stewart of Palmerston, transferred from the Department of the Attorney-General, *re* the supervision of his Vaccine Farm by the Board, and the extending to it the Board's patronage.

The following motion regarding the matter was then carried :—

" Moved by Dr. Yeomans, seconded by Dr. Cassidy : That this Board having received notification from Dr. Stewart, of Palmerston, of the establishment by him of a Vaccine Farm, and that he has supplied medical men throughout the Province with samples of vaccine ; and, further, has asked continued inspection of his farm and methods of procedure ; therefore this Board recommend that the Government should provide for the continued, frequent and thorough inspection of this farm, or other farms that may hereafter be established, with the object of securing a supply of pure and reliable vaccine lymph, procurable within the Province ; and that a copy of this resolution be transmitted to the Attorney-General."

C. W. COVERNTON,
Chairman.

(Second Session.)

FEBRUARY 3rd, 1886.

The Board met at 10.30 a. m., the following members being present :—

Dr. Covernton, Chairman ; Dr. Oldright, Dr. Cassidy, Dr. Yeomans, Dr. Rae, and Dr. Bryce.

The minutes of last meeting as amended were adopted, on motion of Dr. Cassidy, seconded by Dr. Rae : The printing account of the *Gazette* Printing Co., Montreal, for a circular *re* smallpox was certified to on motion of Dr. Rae, seconded by Dr. Cassidy : " That the account of R. White, amounting to $20 being one-half of the amount for printing joint report of Drs. Hingston and Covernton on epidemic of smallpox, be paid. Carried.

Dr. Hamilton, Cornwall, who was present, was introduced to the Board. He explained the nature and extent of his work in Cornwall as Medical Health Officer, acting under the Provincial Board.

Mr. Boyd, Police Magistrate, Vankleek Hill, being present, was likewise presented to the Board, and on request stated his views with regard to the present status of the Health Act, 1884, as regards the powers under it to abate nuisances. Amongst his views the following points seemed of importance :—

1st. As to composition of Local Boards, that in all cases when practicable, they be composed of medical men.

2nd. That in the event of not putting medical men on the Board, the appointing power to be resident in the County Council.

3rd. That as regards the term of office, if the Board be composed of laymen, the term ought to be three years, one-third of the Board retiring annually.

4th. That as to funds, the Council be required to supply them on a requisition passed by the Local Board of Health, the amount to be limited by the *per capita* basis of population.

5th. Do away with the $2,000 clause, *re* Nuisances in Act of 1885.

6th. If *Certiorari* fails, on the conviction of the Police Magistrate, the nuisance as now may continue for two years.

Dr. Oldright afterwards, in a few remarks, thanked Mr. Boyd for his valuable hints.

Dr. Yeomans presented the report of the Special Committee on Cheese Factories. The report after being read, and some discussion on it having taken place, was received and adopted, on motion of Dr. Yeomans, seconded by Dr. Bryce. Mr. J. Robertson, of the Committee of the Dairymen's Association, being present, was introduced to the Board, and asked to present his views and those of his Committee. Mr Robertson read the report of his Committee, and answered a large number of queries put by members of the Board. Further consideration of the matter being desirable, the Board adjourned the discussion till 2.30 p. m.

C. W. COVERNTON,
Chairman.

(Third Session.)

FEBRUARY 3rd, 1886.

The Board met at 2.30 p. m., all the members being present.

The reading of the minutes having been omitted, the discussion of the special report on Cheese Factories was continued.

Mr. Robertson in reply to queries, spoke regarding the possibilities and desirability of having inspections of dairies carried on. He thought it would be desirable to have examinations of milk supplies made. The report on Cheese Factories was then adopted, on motion of Dr. Yeomans, seconded by Dr. Bryce: The following motion was then carried:—

"Moved by Dr. Yeomans, seconded by Dr. Rae: That in consideration of the very great interest manifested by Mr. Robertson, of Harriston, in the matter of sanitary improvement of Cheese Factories, Creameries and Milk Supplies, this Board tenders him a cordial and hearty vote of thanks for his valuable services and suggestions."

It was then moved by Dr. Bryce, seconded by Dr. Yeomans: That the partial report of the Committee on Legislation as read be received, and that the Board go into Committee of the Whole to consider it. Carried.

The Committee of the Whole, after discussion of its provisions, read and reported the prepared Bill to Expropriate Land for Smallpox Hospital purposes as amended, which was adopted, on motion of Dr. Rae, seconded by Dr. Cassidy.

The same Committee presented the following amendments to sec. 19, Act of 1884, and sec. 3, Act of 1885, which, on motion of Dr. Rae, seconded by Dr. Yeomans, was adopted.

Amendment to Sec. 19, Act of 1884:—

"Such appointment, subject to the approval of the Board, may be made by the Chairman of the Provincial Board.

Amendment to Sec. 3, Act of 1885:—

"Such appointments, subject to the approval of the Board, may be recommended by the Chairman of the Provincial Board of Health."

Dr. Coverton, after the Committee had reported, and these amendments to legislation had been adopted, discussed at some length the prospects for the next American Public Health Association, and explained the work of Members of that Association belong-

ing to this Board, making arrangements thus for the coming meeting in Toronto. The following resolution, moved by Dr. Oldright, seconded by Dr. Yeomans, was carried :—

"That Drs. Covernton, Cassidy, Prof. Galbraith, Dr. Bryce and the mover, be a Committee of the Board to act in concert with the Committee appointed by the American Public Health Association, with the City Council, the Canada, Ontario and Toronto Medical Associations, Sanitary Associations and Canadian Institute, and representatives of any other bodies, in making arrangements for the meeting of the American Public Health Association to be held in Toronto in October ; and that this Committee wait upon the Government with regard to an appropriation to meet the expenses connected therewith."

The following motion was carried :—

Moved by Dr. Rae, seconded by Dr. Cassidy : That the Special Committee *re* Cheese Factories and Creameries be instructed to take such action in conjunction with the Committee on Legislation—and the Committee of the Western Dairymen's Association, as will place Municipal Authorities in a position to provide, by a suitable system of inspection, for the purity of their milk supplies, and to report to this Board at its next meeting.

The Board then adjourned.

C. W. COVERNTON,
Chairman.

(Fourth Session.)

FEBRUARY 4th, 1886.

The Board met at 11 a. m., all being present except Prof. Galbraith.

The reading of the minutes of previous meetings having been deferred, the Board resolved itself into a Committee of the Whole on the Vaccination Bill, Dr. Rae being in the chair.

The Board arose and reported progress, and adjourned till 2.30 p. m.

(Fifth Session.)

FEBRUARY 4th, 1886.

The Board met at 2.30 p. m., all the members being present.

The Board, in Committee of the Whole, resumed the consideration of the Bill *re* Vaccination.

The Committee thereafter arose and reported the Bill as amended ; and on motion of Dr. Rae, seconded by Dr. Covernton, the Report of the Committee of the Whole was adopted.

Dr. Cassidy thereafter presented a summarized report of answers to questions contained in a circular sent by the Committee on Publication, according to the terms of a Notice passed at a preceding meeting.

It was then moved by Dr. Rae, seconded by Dr. Bryce and carried: "That the tabulated results contained in the circular dated November 23rd, 1885, be referred back to the Committee with instructions to draw up such conclusions therefrom, and to make such recommendations to the Minister regarding them, as the Committee may deem expedient."

" Dr. Rae then moved, seconded by Dr. Cassidy: "That a sum not exceeding $40 (say forty dollars), be placed in the hands of the Chairman for the purchase ot such of the recent sanitary publications, as may appear necessary for the work and purposes of the Board." Carried.

The Board thereafter resolved itself into a Committee of the Whole on the Plumbing Bill, and after some consideration arose and reported progress.

The Board then adjourned till next morning at 10.30 o'clock.

(*Sixth Session.*)

FEBRUARY 5th, 1886.

The Board met at 11 a. m., all the members being present except Prof. Galbraith.

The minutes of the last meeting were read and adopted on motion of Dr. Rae, seconded by Dr. Bryce.

No communications having been received, the Board resolved itself into a Committee of the Whole on the Plumbing Bill.

The Committee arose and reported progress, and the Board adjourned till 3 p. m.

CHAS. W. COVERNTON,
Chairman.

(*Seventh Session.*)

FEBRUARY 5th, 1886.

The Board met at 3 p. m., all the members being present.

The minutes of the last meeting having been omitted, the Board resolved itself into a Committee of the Whole, finally arose and reported the Plumbing Bill as amended.

On motion of Dr. Rae, seconded by Dr. Oldright: The resolution to adopt the Bill as amended to form Schedule C to Public Health Act, 1884, was carried.

It was then moved by Prof. Galbraith, seconded by Dr. Yeomans: That the various bills and items of proposed legislation be placed in the hands of a Committee, consisting of the Committee on Legislation and Drs. Oldright and Rae, to be brought before the attention of the Government at such time as they may deem most opportune. Carried.

The report of a Committee of the Board appointed to prepare a work on Hygiene for the use of Schools, was presented by Dr. Oldright, after which the following motion was passed:—

Moved by Dr. Oldright, seconded by Prof. Galbraith: "That the Manual of Hygiene for use in the Normal and Model Schools, appended to the report of the Committee appointed to prepare the same, be, and is hereby adopted by this Board, subject to such textual changes as may be needed in the unrevised galleys of Chaps. XVI-XXXI."

The report of the Committee on Publication was presented by Dr. Oldright, who stated the plan which the Committee thought desirable for the next Annual Report of the Board. The report was adopted on motion of Dr. Oldright, seconded by Dr. Yeomans.

The Board finally adjourned to meet again at the call of the Chair.

CHAS. W. COVERNTON,
Chairman.

SPECIAL MEETING OF THE BOARD.

APRIL 21st, 1886.

A special meeting of the Board was called, at which there were present: Dr. Covernton, Dr. Cassidy, Dr. Oldright and Dr. Bryce.

It was moved by Dr. Bryce, seconded by Dr. Cassidy: "That the minutes of the last meeting be omitted." Carried.

The Chairman stated the occasion for calling a Special Meeting, and called upon Dr. Bryce to read a special report on the "Toronto Cattle Market Question."

The report having been read was unanimously adopted and amended, on motion of Dr. Bryce, seconded by Dr. Cassidy. The report was by resolution, ordered to be transcribed and a copy of it sent to the Mayor and Council of the Corporation of the City of Toronto.

The meeting then adjourned.

CHAS. W. COVERNTON,
Chairman.

SECOND ANNUAL QUARTERLY MEETING.

(*First Session.*)

MAY 18th, 1886.

The Board met at 2.30 p.m., all the members being present.

The Secretary read the minutes of the two last meetings, which, on motion, were confirmed.

A number of communications, both written and verbal, were presented to the Board by various members. Dr. Cassidy then made some remarks regarding an invention which Dr. Henderson, of Winnipeg, wished to exhibit to the Board. The Board agreed to hear Dr. Henderson on Wednesday morning, at 11 o'clock.

The Chairman then proceeded to read his annual address.

After the reception of the address, Dr. Cassidy discussed the paragraph of the report referring to the inspection of the drains and plumbing of buildings, and urged that the regular inspection of all works under municipal control, whether public or private, be better carried out; illustrating, however, the difficulties by the necessity forced upon the License Commissioners of witholding a hotel license in several instances, until urgent sanitary improvements had been performed on the premises.

Dr. Yeomans further emphasized this necessity by pointing out that it was needed in rural municipalities, and urged that Provincial inspection be instituted on some regular basis, and that in particular a number of schools in different parts of the Province be visited and inspected.

Dr. Oldright made some remarks pointing out the necessity of having the western cattle market so situated that no injury from its unsanitary state would result, and that it should be subjected regularly to an inspection, owing to the rapid development of the city in an easterly direction. He also alluded to the east end cattle byre nuisance.

Professor Galbraith, in urging inspection, insisted that the chief officer of any public work ought always to have control of his subordinates, and of their dismissal if insubordinate or incompetent.

Dr. Rae, while concurring in the remarks of gentlemen who had previously spoken regarding inspection, referred to the difficulties of having stringently carried out the Public Health laws by boards, inspectors, etc., through fear of popular resentment.

It was then moved by Dr. Rae, seconded by Dr. Yeomans: "That the Chairman's Anuual Address be adopted and printed in the next Annual Report."

Dr. Covernton gave verbally what had been done in connection with the various matters relating to the American Public Health Association; and Dr. Yeomans read a communication from Mr. Robertson, of the Dairymen's Association, explaining why the pamphlet, directed by resolution of the Board to be prepared, had been delayed,

In this connection the following resolution was carried:—

Moved by Dr. Cassidy, seconded by Dr. Rae: "That having heard the partial report of the Committee *re* Cheese Factories, this Board recommends that said Committee continue to co-operate with Mr. Robertson and the Committee of the Dairymen's Association; and, also, that they report more fully at next meeting of the Board."

A communication from Dr. Clapp, Esq., Public School Inspector of Wellington, *re* School-house in Maryboro', was read. It was referred to the Committee on School Hygiene to take action thereon, if deemed desirable.

Dr. Bryce presented a large number of other communications, *re* matters dealt with during the past quarter, after which the Board adjourned.

CHARLES W. COVERNTON,
Chairman.

(*Second Session.*)

MAY 19th, 1886.

The Board met at 10.30 a.m., all the members being present. The Secretary read the minutes of the last session, which were, on motion, confirmed.

Dr. Henderson was then introduced to the Board, and explained his Automatic Cut-off Gas-Burner, intended to obviate the dangers due to the escaping of illuminating gas. In connection with this matter the following motion was carried :—

Moved by Professor Galbraith, seconded by Dr. Oldright, and carried : "That the matter of Henderson's "Automatic Cut-off Gas Burner," for the prevention of accidents due to the escape of illuminating gas, be referred to the Committee on Ventilation and Poisons, to be reported upon during the present Session."

The Committee on Legislation presented a verbal report regarding the success of the various items of proposed legislation urged upon the Legislature at its last session. The report was adopted, and the Board adjourned to meet at 2.30 p.m.

CHARLES W. COVERNTON,
Chairman.

(*Third Session.*)

MAY 19th, 1886.

The Board met at 2.30 p.m., all the members being present.

The minutes of the last session were read and adopted.

The following motion was then carried in connection with the Report of the Committee on Legislation : —"That the Committee on Legislation be, and is hereby requested to prepare a paper embodying all regulations now in force regarding Vaccination, with the object of having it published for distribution.

Dr. Bryce then read his report on the inspection made of the Ontario Vaccine Farm, at Palmerston. The report was received, and various points in it discussed, after which the following resolution was adopted :—

Moved by Dr. Oldright, seconded by Dr. Yeomans : "That the report of the Secretary on the Vaccine Farm, at Palmerston, be received and adopted, and that the Secretary be instructed to carry out the suggestions contained in the report."

A discussion then took place on a proposition introduced by the Secretary, that an endeavour be made to have an Ontario Association of Medical Health Officers formed. In connection therewith it was moved by Dr. Yeomans, and seconded by Dr. Bryce : "That a Committee consisting of Drs. Oldright, Yeomans and Bryce be appointed to prepare a scheme to be submitted to the Board at its next meeting, for the organization of an Association of Medical and other Officers of Health for the Province of Ontario." Carried.

It was thereafter moved by Dr. Oldright, and seconded by Dr. Yeomans : "That the Board go into Committee of the Whole to consider the appointment of Standing Committees for the year." Dr. Oldright in the chair.

After discussion the Committee arose and reported the following list of members of Committees, which report, on motion of Dr. Oldright, seconded by Dr. Cassidy, was received and adopted.

List of Standing Committees for 1886 :—

1. Committee on Epidemics—Chairman and Secretary.
2. " " Sewerage, etc.—Dr. Oldright and Professor Galbraith.
3. " " Ventilation, etc.—Dr. Cassidy and Dr. Yeomans.
4. " " Poisons, etc.—Dr. Rae and Dr. Cassidy.
5. " " School Hygiene—Drs. Yeomans and Coverton.

6. Committee on Legislation—Dr. Bryce and Dr. Cassidy.
7. " " Finance—Chairman and Dr. Rae.
8. " " Publication—Drs. Oldright, Cassidy and Bryce.
9. " " Foods, Drinks, etc.—Drs. Bryce and Rae.

The annual report of the Secretary to the Board was received, on motion of Professor Galbraith, seconded by Dr. Oldright.

Dr. Oldright then presented the report of the Committee appointed by the Chairman to attend the Sanitary Convention at Woodstock, on March 30 and 31. It was adopted on motion of Dr. Oldright, seconded by Dr. Bryce.

The Board adjourned till 10.30 a.m.

CHARLES W. COVERNTON,
Chairman.

(Fourth Session.)

MAY 20th, 1886.

The Board met at 11.30 a.m., all the members being present.

The minutes of the previous meeting were read and adopted. Dr. Oldright here stated that the Committee on Sewerage was not prepared to report, owing to there being a difficulty in arriving at a conclusion regarding various points in the proposed system of sewerage for Stratford and Owen Sound.

It was then moved by Dr. Rae, seconded by Dr. Bryce: "That the Committee on Sewerage be authorized to take such steps as will place them in possession of all facts necessary to the preparation of said report, and that the Committee present such report to the Board at the earliest possible date." Carried.

It was then moved by Dr. Oldright, seconded by Dr. Cassidy: "That the letter of Dr. Ryall be referred to the Committee on Foods and Drinks, with instructions to report during present meeting if possible, and to take whatever steps may appear necessary to secure purity of ice supplies." Carried.

Dr. Rae moved, seconded by Dr. Oldright: "That the minutes of the last session be reconsidered, and that the Board go into Committee of the Whole to consider its report *re* Standing Committees."

The motion was adopted, and the amended report of the Committee of the Whole on Standing Committees adopted as amended, Dr. Cassidy being added to the Committee on Poisons.

Moved by Dr. Yeomans, seconded by Dr. Cassidy: "That inasmuch as Dr. Stewart, of Palmerston, has fulfilled some of the conditions required by the Board for the supply of reliable vaccine for this Province, this Board would recommend the payment of $250 out of the Government grant; also, that the remainder be paid in quarterly instalments, Dr. Stewart continuing to fulfil the conditions laid down by this Board." Carried.

Dr. Rae then presented the report of the Committee on Poisons, supplemented by a partial report by Dr. Cassidy. Before discussing the report, Dr. G. W. Ross, of Woodstock, was introduced to the Board, and stated some difficulties regarding the disposal of sewage matter in the main sewers of the town, and asked the Board's opinion on the matter. The matter was discussed, and legal remedies for the difficulties pointed out.

The report of the Committee on Poisons and Ventilation was again taken up, when Dr. Bryce moved the reception of the report, seconded by Dr. Rae, and that the discussion of it be adjourned till the special meeting of the Board. Carried.

Moved by Dr. Cassidy, seconded by Dr. Oldright: "That the Board is of opinion that it is most desirable that automatic cut-off gas-burners should be in more general use, and having examined the one presented to the Board by Dr. Henderson, we are of opinion that it is likely to be of great service in preventing fatal accidents from the use of illuminating gas." Carried.

The Board then adjourned to the call of the Chair.

CHARLES W. COVERNTON,
Chairman.

SPECIAL MEETING.

(*First Session.*)

MAY 31st, 1886.

The Board met at two p.m., there being present Dr. Covernten, Dr. Rae, Dr. Cassidy, Dr. Oldright and Prof. Galbraith.

In the absence of the Secretary, Dr. Rae acted as Secretary *pro tem.* The minutes were read, and with an amendment *re* Dr. Oldright's remarks, adopted.

Communications were read from Dr. F. Orme Dudfield, Vice-President of the Association of Health Officers of England and Wales; also from Dr. Saunders, Hon.-Secretary of the same Association. Several other communications were read.

Professor Galbraith presented a report on the proposed system of sewerage for the city of Stratford, recommending some changes in the proposed plan; and also presented a partial report on the proposed system of sewerage for Owen Sound.

Dr. Oldright then moved, seconded by Dr. Cassidy: "That the Board, having already expressed its opinion regarding the site of the Toronto Cattle Market, from a sanitary point of view, it is not desirable to take any further action or discuss the question further until the motion for an injunction now before the Courts is disposed of." Carried.

The following motion was then passed, *re* the Symington system of upward filtration of sewage:—

Moved by Dr. Cassidy, seconded by Professor Galbraith: "That the system of purifying sewage by upward filtration, as exhibited to this Board by the late Mr. Symington, be referred to the Committee on the Disposal of Sewage, with the request that they investigate the same and report at our next quarterly meeting; and that the Committee are hereby authorized to incur any expense which may be necessary in carrying out the proposal."

Dr. Rae submitted the report on Foods, Drinks, etc., regarding the question of ice supplies; and on motion of Dr. Cassidy, seconded by Dr. Rae, the report as read was adopted. The Committee on Legislation was instructed to procure legislation *re* ice supplies.

A discussion then took place on the report by Dr. Cassidy, *re* an automatic cut-off Burner. The report was adopted as amended.

The Board then adjourned to the call of the Chair.

H. P. YEOMANS.
Chairman, *pro tem.*

SPECIAL REGULAR MEETING.

(*First Session.*)

JULY 20th, 1886.

The Board met at two p.m., the following members being present:—Dr. Oldright Dr. Rae, Dr. Cassidy, Dr. Yeomans, Prof. Galbraith and Dr. Bryce.

In the absence of Dr. Covernton, Dr. Yeomans was appointed chairman *pro tem.* The minutes of the last special meeting were read and confirmed.

A large number of communications were read, most of them being with regard to smallpox cases in the vicinity of Owen Sound. A communication *re* the means of limiting nuisances arising in connection with cheese factories, was received and read, from Mr. J. Robertson Creamery Department, Agricultural College, Guelph. Communications from Cotswold, Moira, Victoria, etc., were read. Dr. Bryce then presented a report on the quarantine system of the St. Lawrence, from the Committee on Epidemics. The reading of the report was proceeded with till 6 p.m., when the Board adjourned till 10.30 a.m., Wednesday.

(*Second Session.*)

WEDNESDAY, JULY 21st, 1886.

The Board met at 10.30 a.m., the following members being present :—Dr. Yeomans, Chairman *pro tem.*, Dr. Rae, Dr. Cassidy Dr. Oldright and Dr. Bryce. The minutes of the last meeting were read and confirmed.

A number of communications were read, the principal being regarding smallpox, from Dr. H. B. Baker, Lansing, Michigan, and Acton C. Burrows, Deputy-Minister of Agriculture, Winnipeg.

The reading of the report of the Committee on Epidemics was resumed, and its consideration continued, after which it was adopted, in accordance with the following resolution :—

Moved by Dr. Bryce, seconded by Dr. Oldright : "That the report of the Committee on Epidemics regarding the Quarantine System of the St. Lawrence be received and adopted, and that the Publication Committee be authorized to have 1,500 copies of it printed in pamphlet form."

A report was thereafter presented and read by the Secretary, *re* an investigation of the nuisance arising from the Starch Manufactory, at Brantford, after which it was adopted.

A verbal report was made by the Secretary, of a visit made to Lindsay by him, *re* certain nuisances and unsanitary conditions arising from sewers, etc., and regarding the the causes of the prevalence of diphtheria in the town. The report was adopted, after which the Board adjourned.

H. P. YEOMANS,
Chairman, *pro tem.*

(*Third Session.*)

JULY 21st, 1886.

The Board met at three p.m., there being present Dr. Yeoman's, Chairman ; Dr. Rae, Dr. Bryce, Dr. Oldright and Dr. Cassidy. The minutes of the last meeting were, on motion, confirmed.

The report of the Committee on Sewerage *re* the plans presented to the Board regarding the sewerage system of Owen Sound and Stratford, was read and adopted, on motion of Dr. Bryce, seconded by Dr. Rae.

It was thereafter moved by Dr. Bryce, seconded by Dr. Cassidy, and carried : "That the report of the Committee on Legislation, in which was presented an abstract of the laws relating to Vaccination, be adopted ; and that 3,000 copies of the abstract be printed in pamphlet form."

It was then moved by Dr. Cassidy, seconded by Dr. Rae : "That 2,000 copies of the Acts of 1884–5–6 be struck off in pamphlet form for distribution to Boards.

Moved by Dr. Oldright, seconded by Dr. Cassidy, and carried : "That the Board hereby recommend that the travelling expenses of the Secretary in visiting the quarantine station of the St. Lawrence, be paid out of the funds of the Board."

It was then moved by Dr. Oldright, seconded by Dr. Yeomans : "That the Committee on Epidemics be instructed to revise pamphlet No. 15 on Contagious Diseases, and send the same to the Publication Committee, which is hereby authorized to have 5,000 copies printed.

It was next moved by Dr. Oldright, seconded by Dr. Rae : "That a copy of the report on the Quarantine System of the St. Lawrence be transmitted to the Head of the Department, with the request that he take the necessary steps to have the facts and suggestions contained therein laid before the Federal authorities, in response to the invitation

contained in the letter of the Hon. J. C. Pope, Minister of Agriculture, addressed to the Honourable the Provincial Treasurer and Commissioner of Agriculture and Health, dated April 8th, 1885.

Dr. Bryce, as Chairman of the Committee on Foods, then read a report on the Slaughter-house and Abattoir question. He referred to the agitation now being made by some of the butchers of Toronto to have Sections 8 and 9, Schedule A, Public Health Act, 1884, repealed: and answered the arguments and objections urged by them. He also pointed out the advantages accruing to the public and the retail butchers, to be derived from the establishment of a public abattoir, and further drew attention to the fact that in many parts of the city: slaughter-houses are now causing much annoyance to persons residing in their vicinity. Finally, he referred to the diseases caused by eating unsound meat, and to the urgent necessity there is for live meat inspection which, under present arrangement does not exist and cannot be efficiently carried on.

The report was received and adopted, and the opinion expressed in the report regarding the undesirability of any action being taken by the Toronto City Council, tending to alter the stringent conditions of Schedule A, Public Health Act, 1884, as relating to slaughter-houses, was unanimously re-asserted by the Board.

Dr. Rae then moved, seconded by Dr. Oldright: "That Dr. Cassidy be appointed a delegate from this Board to represent the public health interests of the Province in the discussions regarding quarantine and other public health matters, at the meeting of the Canada Medical Association, to be held in Quebec on the 18th of August next." Carried.

The Board then adjourned.

H. P. YEOMANS,
Chairman, *pro tem.*

SPECIAL MEETING OF THE BOARD.

OCTOBER 4th, 1886.

The Board met at 8 p.m., there being present Dr. Covernton (chairman), Dr. Oldright, Dr. Cassidy, Professor Galbraith, Dr. Rae and Dr. Bryce.

The Committee on Sewerage and Water Supply submitted the report on the Trunk Sewer scheme for the city of Toronto, which, in accordance with Sec. 38, Public Health Act, 1884, requires to be submitted to this Board for its approval.

The report of the Committee, after a very careful discussion, was adopted.

The Board then adjourned.

CHAS. W. COVERNTON,
Chairman.

FOURTH REGULAR MEETING OF THE BOARD.

(*First Session.*)

OCTOBER 11th, 1886.

The Board met at 11 a.m., there being present Dr. Covernton, Dr. Oldright, Dr. Cassidy, Dr. Rae, Dr. Yeomans and Dr. Bryce.

A number of communications giving information regarding recent outbreaks of Diphtheria were read from St. Marys, Hawkesbury East township, Cherry Valley, Fenelon Falls, Ancaster and Lindsay.

The Board adjourned at 1 p.m.

(*Second Session.*)

The Board met again at 3 p.m., there being present all the members present at last session.

Further communications were read, being those from Harriston, regarding a nuisance existing there; from Windsor and Chatham, regarding smallpox; from Middlesville, Lanark county, regarding a mail-carrier whose family has Scarlet Fever; from Napanee regarding Diphtheria, and one from Annan regarding compensation for medical servics *re* Smallpox at Leith.

Dr. Covernton thereafter confirmed the minutes of the special meeting of October 4th, in connection with which meeting, and the report thereat presented, the following motion was carried:—Moved by Dr. Cassidy, seconded by Dr. Yeomans: "That the report of the Committee on the Disposal of Sewage *re* the contemplated system of sewerage prepared for the city of Toronto, adopted at the last meeting, be printed in the next Annual Report."

Dr. Covernton then made a verbal report on the Hampstead Temperance Hospital, the London Ambulance System of Hospitals for Infectious Diseases; and also of the conclusion of Dr. Shakespeare, Pennsylvania University, *re* the Continental experiments on the nature of Cholera.

It was then adopted on motion of Dr. Bryce, seconded by Dr. Oldright.

Dr. J. J. Cassidy next read a report on the discussions relating to quarantine, and other matters of public health interest, at the meeting of the Dominion Medical Association at Quebec.

The report as read was received and adopted, on motion of Dr. Bryce, seconded by Dr. Yeomans.

(*Third Session.*)

October 12th, 1886.

The Board met at 11 a.m., there being present: Dr. Covernton, Dr. Oldright, Dr. Bryce, Dr. Cassidy, Dr. Yeomans and Dr. Rae.

A communication was read from Dr. McLellan, Trenton, *re* Smallpox; and the action taken by the Board *re* the outbreak was indicated.

The Board, on motion of Dr. Bryce, seconded by Dr. Rae, went into Committee of the Whole *re* Regulations for limiting Diphtheria. The Committee arose at 1 p.m. and reported progress.

The Board then adjourned till 3 p.m.

(*Fourth Session.*)

October 12th, 1886.

The Board resumed work at 3 p.m., there being present: Dr. Covernton, Dr. Oldright, Dr. Rae, Dr. Yeomans and Dr. Bryce.

The Board again resolved itself into Committee of the Whole to discuss the Diphtheria Regulations.

The Committee arose and reported progress, and adjourned at 6 p.m., to meet on Wednesday at 11 a.m.

(*Fifth Session.*)

October 13th, 1886.

The Board met at 11 a.m., there being present: Dr. Covernton, Dr. Oldright, Dr. Cassidy, Dr. Yeomans, Dr. Rae and Dr. Bryce.

The Board resumed work in Committee of the Whole, on the Diphtheria Regulations. After consideration the Committee arose and reported the Regulations to the Board.

Dr. Cassidy, acting Chairman in the absence of Dr. Covernton, being in the chair, the Regulations *re* Diphtheria were adopted on motion of Dr. Bryce, seconded by Dr. Rae.

Dr. Oldright then moved, seconded by Dr. Rae: "That the Committee on Legislation be directed to bring the Regulations *re* Diphtheria before the Minister for approval of the Lieutenant-Governor."—Carried.

It was then moved by Dr. Oldright, seconded by Dr. Rae: "That the report of the Committee on Publication, *re* the Rules for Checking the Spread of Contagious and Infectious Diseases be adopted."—Carried.

Dr. Oldright then moved, seconded by Dr. Rae: "That the report of the Committee on the proposed water supply system for Cornwall be adopted."—Carried.

Dr. Oldright stated for the information of the Board, that after the decision of the people *re* the Toronto Trunk Sewer question, he had shown Col. Waring and other prominent sanitarians over the island and the location of the proposed sewage outfall; and also added some additional information regarding lake currents, etc.

It was thereafter moved by Dr. Rae, seconded by Dr. Yeomans, and carried: "That the Committee on Publication be directed to proceed to the selection and preparation of the materials for the next Annual Report, to be submitted for approval to the Board at its next meeting."

The Board finally adjourned at 2 p.m.

CHAS. W. COVERNTON,
Chairman.

SPECIAL GENERAL MEETING.

(*First Session.*)

WEDNESDAY, December 15th, 1886.

The Board met at 2.30 p.m., there being present: Dr. Covernton, Chairman; Dr. Oldright, Dr. Cassidy, Prof. J. Galbraith and Dr. Bryce.

The minutes having been read and confirmed, the Secretary read a number of communications regarding Smallpox in Hinchinbrook township and at Trenton; and Diphtheria in Lindsay, Beachville, Glamorgan township, Brantford, etc., etc.; as well as a communication from Vittoria indicating the action taken in conection with a nuisance arising from a cheese factory and piggery connected therewith.

Answers from a large number of States were read, indicating their adhesion to a common plan of inter-state notification of disease.

The Report of the Standing Committee on Sewerage and Water Supply was then presented, and dealt with a proposed sewerage system for a part of St. Catharines, as also a proposed system for Brockville.

The report was adopted on motion of Dr. Oldright, seconded by Prof. Galbraith.

Several accounts were presented and passed.

It was then moved by Dr. Oldright, seconded by Prof. Galbraith: "That copies of Dr. Cassidy's report, in which he discussed the means to be adopted for diminishing the amount of mortality amongst foundlings, be sent to the Head of the Department, to the Attorney-General, and to the President and Secretary of the Committee which recently waited on the members of the Government in connection with the subject."

Dr. Oldright thereafter moved, seconded by Dr. Bryce: "That the communication of Coroner Duncan, regarding the means to be adopted with a view to lessen the mortality from the ignorant use of illuminating gas, be referred to the Committee on Poisons and Accidents, with instructions to report at the next meeting of the Board."

The Board then adjourned.

(*Second Session.*)

THURSDAY, December 16th, 1886.

The Board met at 11 a. m., there being present: Dr. Covernton, Chairman; Dr. Cassidy, Dr. Oldright and Dr. Bryce.

Communications having been read and received, the Secretary presented the report on his inspection of the Ontario Vaccine Farm, Palmerston, which, on motion, was adopted.

The report of the Committee on Publication was read and adopted as amended, on motion of Dr. Oldright, seconded by Dr. Bryce. Mr. Alan Macdougall being invited to a seat at the Board, as Secretary of the Toronto Sanitary Association, made a statement in which the favourable progress of the proposed plumbing by-law for Toronto, before the Local Board of Health and the City Council, was indicated. The Chairman thanked the gentleman for his remarks.

It was then moved by Dr. Bryce, seconded by Dr. Cassidy: "That Drs. Oldright and Rae be appointed a Committee, in addition to the members of the Committee on Legislation, to revise existing Health Acts and secure amendments thereto, while in process of consolidation."—Carried.

The Board then adjourned.

CHAS. W. COVERNTON,
Chairman.

ANNUAL REPORTS

OF

LOCAL BOARDS OF HEALTH.

In the following pages will be found an extended summary of all the reports of Local Boards throughout the Province, received up to the time of the preparation of the Annual Report. Many other reports have since been received, but unfortunately too late for publication. It is hoped, however, that those appended will serve to fully illustrate the progress, development and present condition of municipal health work throughout the Province.

In many of the reports of our large cities and towns, gratifying evidences of the advance of practical sanitation are given; and there can be no doubt but that, with the yearly increased systematizing of work naturally falling to the health departments, we shall see sewerage systems, public water-supplies, etc., increasingly established on broad, scientific and safe sanitary foundations.

ANNUAL REPORTS OF LOCAL BOARDS OF HEALTH.

CITIES.

BELLEVILLE.

Medical Health Officer's Report.

As Medical Health Officer of the city for the year 1886, I have the honour to report as follows:—

1. At the request of the Board I had the order issued for the cleaning of yards and emptying and disinfecting of water-closets, which was only fairly responded to. I made a personal inspection of the yards on Front street and found the greater number cleaned, and those who had not done so I had served with notices through the police, directing them to do so at once, which was effective. The Inspector has brought to my notice some seventy-eight cases of water-closets and yards which required cleaning and disinfecting. I served the necessary order, after, in a great many instances, going myself and seeing the nuisance complained of. I would hereby draw the attention of the public to the necessity, in writing to me, of signing their names to the letter of complaint, not necessarily for publication, but simply for my own guidance and to satisfy me that the complaint is genuine. I have received a number of anonymous complaints on which I could not act, the complaints in a great many instances originating in neighbours quarrelling amongst themselves and trying to make me their cat's-paw and do their dirty work.

2. I would again draw the attention of the Council to allowing the keeping of pigs within the corporation during the summer months: no matter how clean the styes may be kept, it is impossible to do away with the stench from them. I have had some complaints from this source. I would also draw the attention of the Council to the slaughter-houses, and soap and tallow rendering places of manufacture, complaints having been made of these places, but owing to the Council not giving the Board power under the Act as passed by the Ontario Government, the Board's hands were to a certain extent tied.

3. In connection with the health of the city, the Board would suggest that a survey of the city be made for a system of drainage, so that drains made should be made as part of that system, more especially as the city is to have water-works; drainage will then be an absolute necessity.

4. The city for the past year has been very healthy, our death rate being amongst the lowest for the Dominion. Still it does not do for us to rest. A proper system of drainage and good water will make our city the healthiest city in Ontario.

5. The number of yards ordered to be cleaned was 78; water-closets emptied and disinfected 175; other nuisances, such as manure heaps, dead horses and dogs, removed, 49.

6. Complaints having been made in the press of the unsanitary state of the police cells, and the Council having decided to remove them from the city buildings, I suggested to the Market Committee to meet the Board of Health and inspect the building. I drew the attention of the Market Committee to the drain leading from the building into the sewer, and showed them that the building was simply a shaft for ventilating the sewer. I suggested that a proper trap-drain be put in and larger and straighter pipes put in the cells, and that if this was done I had no doubt the nuisance would be abated, and it would be seen that it was the sewer and not the cells that caused it. This could be done

by an expenditure of about $100, thus saving to the city the cost of erecting a new building at a cost of $2,000 or $3,000. The Market Committee agreed with me, and the drain was trapped and the pipes put into the cells as suggested, with a result satisfactory. There has been no complaints since, in fact the building is now in a better sanitary state than at any time since its erection.

7. During October I heard that a case of smallpox occured in Trenton. I at once wrote to the Medical Health Officer at Trenton for particulars and asking him what precautions were taken. He wrote me that one case, that of a child, had broken out, and that it had been removed to the island, together with its mother and all those who had been in contact with it. I would suggest that the Council place a small sum to the credit of the Board to meet any case of this kind. Promptness in dealing with the first case would be the means of saving thousands of dollars to the city.

I cannot close my report without again recommending the City Council to pass a by-law doing away with the pit system of water-closets and adopting the dry-earth closets. By doing so the city would be healthier, the death rate would be lowered, and in case of an epidemic of cholera breaking out it could be easier stamped out than under the present system.

All of which is respectfully submitted.

R. TRACY, M.D.,
Medical Heath Officer.

BRANTFORD.

Medical Health Officer's Report.

GENTLEMEN,—I have the honour to submit the following annual report upon the sanitary condition of the city of Brantford for the year 1886:—

The number of deaths registered up to November 1st is 150. Assuming the same rate of mortality for the remainder of the year the whole number for the year 1886 will be 180, making a death rate of 14¼ per thousand in population of 12,600, as compared with a death rate of 175 or 14¼ in 1885.

Owing to the fact that the law respecting the registration of contagious disease has been very much disregarded, it is impossible to give any estimate of the number of such cases in Brantford during the year.

Of measles, of a comparatively mild type, there have been a good many cases with no death reported.

There have been some cases of scarlet fever with one death reported.

Four deaths from diphtheria have thus far been reported.

On several occasions during the year epidemics of the above diseases have been threatened. Their extension, it is believed, has been to a good degree prevented by the measures taken rigidly to exclude from the public schools all children coming from any house where any sickness existed until it was shown that such sickness was not of an infectious character.

In the month of June four cases of undoubted varicoid (umbilicated varicella) occurred in the Mohawk Institution, within one mile of the city. As this disease is capable of imparting true smallpox, under favouring circumstances, great anxiety was felt as to the proper course to pursue. To close up the Institution and distribute ninety pupils through the reserve and other Indian settlements in Canada, carrying probably with them the germs of smallpox, was not to be thought of. The course decided on was to perform thorough vaccination, to completely isolate all affected pupils for a long period and to establish a partial quarantine of the Institution until the danger passed. By these measures the danger was rapidly obviated.

The number of deaths from typhoid fever registered up to the present date is four, exclusive of any that have occurred outside of the city limits. I regret, however, that this

conveys no idea of the amount of sickness from that disease, which has been unusually large since about the middle of August.

In the John H. Stratford Hospital alone there have been twenty-five cases during the three last months, and there are at this moment ten cases of typhoid there out of a total of 27 cases in hospital.

From my own knowledge and from such information as I can obtain from the city physicians, I am satisfied that the number of cases outside of the hospital, including those in the immediate suburbs, has been four times as many more, making in all, say 125 cases. Many of these cases have been very severe and of long duration, although the actual number of deaths has been exceptionally small.

Much anxious consideration has been given to this matter. The weather during the spring, summer and autumn, has been unusually salubrious, there having been no prolonged periods, either of excessive heat or of cold or damp. To what cause then are we to ascribe the presence of so much fever?

A large factor in the causation of fever as well of other zymotic diseases in the city is undoubtedly the want of pure drinking water. A very large proportion of the wells are to a greater or less degree fed by surface water filtered through a polluted soil, and as all the Brantford wells may, generally speaking, be said to tap the same pervading sheet of water, resting on a bed of clay and underlying at variable depths the superimposed sand and gravel, it may well be doubted whether there are many which are at all times perfectly reliable, although rough testing or even accurate chemical analysis may reveal the presence of but little organic matter.

An important cause for the exceptional amount of fever this year is, however, believed to have been the state of the basin of the canal. The condition of this basin is always bad, but this year it has been exceptionally bad, the dam at the feed gates having broken away in the spring the water of the river ceased to flow into the canal for some months, and large portions of the basin lying in the heart of the city became partially dry and covered with rank vegetation, other large portions being converted into a stagnant pond of slimy water, re-inforced by the filthy discharges from a number of drains and small sewers, the whole expanse being offensive to sight and smell, and obviously unwholesome in the last degree.

Numerous and loud complaints were made as to this dangerous nuisance, but there did not seem to be any way by which either the Local Board or the Provincial Board of Health could remedy the evil.

A number of places where typhoid fever existed were visited and thoroughly inspected. One or two may be specially referred to. In one block, on the plateau, in the east ward, in a dry and usually very healthy locality, there were ten cases of fever in five dwellings. The block contains about two acres, on which there are four single and two double dwellings, occupied by seven families, one single dwelling being unoccupied. The first one attacked was a moulder, in August; he was ill for about six weeks; no other member of his family was affected. The next case was in a dwelling about a hundred feet from the house where the first case occurred. This was a middle-aged woman, and her husband and four children were subsequently taken down. In the meantime a young girl in the next house, about sixty feet distant from the last, was stricken. Also a child in the house next adjoining. Lastly, in another dwelling, some sixty feet from the first one, the wife of the occupant had a mild attack. Some of these cases were very severe, and some have not yet recovered. It was found that in the second and third houses attacked, in which were seven of the ten cases, milk was obtained from the same place, and this milk was shewn to have an unpleasant taste. On visiting this dairy, the well from which water was got for rinsing the utensils was only eight or nine feet from the cow stable and from a large heap of manure, in such a position that it was impossible that the well should not be contaminated. It is probable that this cause may have contributed towards increasing the severity and duration of some of the cases.

The patient first attacked passed, in going to his work, along and across the canal basin a number of times daily, while it was in its most offensive state, and he says that it used to make him sick." He believes that his fever was caused thereby. The dis-

charges from this patient were buried in the garden about one hundred feet from the well on the premises next attached.

This well yields a large supply of water, evidently drawing its supplies from a wide range. The soil is very porous and, notwithstanding the distance, I think it possible may have been contaminated from the discharges of the first patient.

In another place, on the corner of Alfred and Darling streets, there were two severe cases of fever in two tenements in close proximity. The water here was bad; the well was only a few feet from an old closet; in an adjoining lot, at a short distance, was a soak pit into which slops were thrown. I do not know that in these last cases the fever was caused by the impure water, but every one must know that no human beings ought to be compelled to allay thirst with water obtained from such sources.

The only other supply of drinking water in Brantford besides that derived from the wells, is that obtained from Wilkes' creek by means of the waterworks. In some places, on account of the obvious badness of the well, this water is used and I think to a much greater extent than is generally supposed. This water has been examined a number of times, though not subjected to an exact chemical analysis. The samples examined have not appeared to contain much organic matter, and coming from a running stream exposed to air and sunlight, it is probable that it is not worse than that obtained from a majority of the wells; but the fact that the stream actually receives the drainage of many dwellings and that it is impossible to protect it from a host of other impurities, is sufficient to condemn it utterly. In case of contamination of this stream from any typhoid cases, fatal results may be expected.

Such being the state of the case, it seems to me that there is no room for difference of opinion on the question of the necessity of the City of Brantford taking measures without unnecessary delay to provide an ample supply of pure water for the use of its inhabitants.

Turning from the disagreeable subject of water to the more pleasant one of milk, I have to report that this matter has received faithful attention, with results which have been and will, I believe, continue to be most satisfactory.

Permits for the sale of milk were granted free of charge on July 1st and later, tenable to December 31st, subject to cancellation for infractions of the by-law, to 28 persons.

The dairies were nearly all situated in the township, and were all visited and thoroughly examined by the Sanitary Inspector, and full reports entered in a Milk Inspection book.

The instruments used by the Brooklyn Board of Health, by which the addition of water, removal of cream or retention of strippings may be readily ascertained, were obtained and twenty-four samples of milk have been tested.

The importance of milk inspection is much greater in the winter months than in the summer; and it is intended to enforce the law with great strictness, not only as to the adulteration of milk, but as to the uncleanness of the byres, unhealthiness of the cattle, and as to the use of putrescent and other improper foods, and of impure water.

During the year Mr. James, the Sanitary Inspector, has made 620 house to house inspections. 155 complaints were entered on the complaint books; 42 of these referred to offensive closets and cesspools, some of which were condemned, dry closets being substituted and the residue properly cleaned; 9 related to offensive manure heaps; 5 to the deposit of dead animals in the canal, in Wilkes' creek and other places; 1 only as to hog pens; 1 only as to slaughter houses. Two complaints were made of old tenements in a dangerously filthy state; the occupants were finally got out of these places and both were pulled down. Thirty nine complaints were made of foul wells, 4 of which were condemned and filled up, and the others cleaned. Many more would have been condemned if there had been any other supply of water obtainable.

Several complaints were made in reference to the draining of houses into Wilkes' creek. This is one of the matters which has not been disposed of, and to which I invite the attention of the Board.

Complaints were also made as to the filthy state of the Market square. A weekly cleaning of this square is now enforced.

Early in the year many urgent complaints were made against the Market street drain, which, originally intended for draining water from cellars, was used for sewage purposes. The drain becoming obstructed, the contents were forced back into the cellars of several shops. Failing in every other means to remedy this evil, it was found necessary, in the face of much opposition, to open up the drain and wholly cut off some of the connections.

Several other drains were complained of, notably the untrapped drain from the meat market discharging the washings of the stalls, refuse, scraps of meat and other garbage into a large soak pit on the square, into which pit the sewage from the water-closets in the building was also discharged. The only free exit for the foul gases of this pit was into the meat stalls.

This nuisance was totally abolished, dry-earth closets introduced, and the pit and drain filled up.

The violent opposition made to the removal of this most dangerous nuisance well illustrates the desirability of a wider diffusion of knowledge on sanitary matters.

A case of typhoid fever and one or two of diphtheria at the Orphanage, occupied by some fourteen children and others, led to an inspection, which showed that the wash-room, bath-room and sinks all emptied into a large vault, from which the putrid air had no escape whatever, except into the house, the atmosphere of which in some of the rooms in the morning was said to be exceedingly bad.

At the J. N. Stratford Hospital, complaint having been made by persons passing on the Tranquility road, it was found on inspection that all of the refuse, liquids from the kitchen, laundry and baths, as well as all the hospital sewage were discharged into an enormous pit near the road, unprovided with any ventilation pipes, that this pit becoming full had burst out, and a running stream of sewage escaped into the public highway.

The Governors of the Hospital expressed their willingness to incur any expense requisite to remedy this serious state of affairs. A system of treating this refuse by downward filtration—a modification of Col. Waring's plan,—was therefore devised and established, the situation of the Hospital being very favorable for this. The details cannot here be explained. After a trial of four months this plan proved to be entirely successful.

The above are some of the more important matters which require attention during the year.

With regard to the dry-closet system, it may be said that a great many buildings have been erected during the year, in nearly all of which this system has been adopted. It has been further extended in the public schools, connected with which it is intended, next year, to abolish the last of the old closets which remain. Owing to ignorance, indifference and laziness, and consequently improper management, this system has been unsatisfactory to some, but its merits are beyond question, and within the range of its applicability it must entirely supercede the old vault system.

Unfortunately this system is not well adapted to the disposal of liquid refuse in any considerable quantities. In places closely built up and in the central parts of the city, the demand for relief in this respect has become urgent.

It is less injurious that liquid refuse should be discharged into the street, exposed to the air and sun, than that it should be retained in pools or soak-pots, or even in ventilated cisterns in small yards. But even if such liquids could be speedily carried off by the street gutters, they must be received into the canal basin where there being little or no current, they must remain for long periods an offence to the sight and a standing danger to health. This basin now receives a certain amount of sewage and very much liquid refuse through drains and otherwise from the Kirby House and Post Office, and from the various buildings adjacent to its banks.

The proposal to fill up this basin, confining the water to a channel on its south side, obviously implies the necessity of providing for some means of carrying off the refuse it now receives.

From both of these pressing circumstances, it seems that a certain amount of sewerage for the central part of the city is required.

If any such works be undertaken they should, of course, be of a permanent character and adapted to meet all further requirements.

I desire to thank the Mayor and Aldermen of the city, and particularly those who are members of the Board of Health, for their cheerful support given during the year, and especially to thank Mr. Woodyatt, the Secretary, for much useful assistance and advice.

I cannot too warmly express my appreciation of the invaluable services of P. C. James, in performing in a thoroughly capable and efficient manner his manifold duties as Sanitary Inspector.

All of which is respectfully submitted.

EGERTON GRIFFIN, M.D.,
Medical Health Officer.

GUELPH.

Medical Health Officer's Report.

I have the honor to submit the following Report as Medical Health Officer for the city:—

The general health of the city during the greater part of this year has been unusually good; with the exception of diphtheria, no epidemics have prevailed to any extent. During the latter part of last year and the beginning of this, a large number of cases of this disease was reported—seventy-four in all—but at present time there are not any cases in the city. The number of deaths registered from the 15th of November, 1885, up to 5th November, 1886, is one hundred and eighty-six, giving a death rate of 18.1 per 1,000 in a population of 10,250, which I am informed by the city clerk was the number of the inhabitants for the past year.

The work of sanitary inspection has gone steadily on, and a large number of yards and closets have been examined by the inspector, and many nuisances abated; pig-stys have been practically abolished, only a few isolated ones remaining—their owners preferring to abandon them rather than submit to the requirements of the law. Scarcely any complaints have been made at the inspector's office this year regarding piggeries, while last year scarcely a day passed without a complaint being made. And with regard to slaughter-houses—those complained of last year have been removed outside the city limits; those within the city limits have been carefully watched and kept clean.

For promoting the cleanliness and health of the city, as well as for the great convenience and comfort of all, one of the most urgent needs at present is an efficient means for the frequent removal of garbage. The almost unavoidable presence of decaying vegetable and animal refuse in private yards is very unwholesome and offensive, and it is important that the Board should give its attention to this matter as soon as possible.

A large number of the wells in the city have been reported by the inspector as being too near the water closets, and that a great many of the wells are polluted by the surface water running into them, thereby making the water unfit for drinking purposes. This surface water *must* pollute the wells by its drainage into them, and nothing is more inimical to the health of the community than water befouled by decomposing, organic or vegetable matter, and the only remedy that I know of is to close up the wells and compel the people to use the city water, which I consider is pure.

In many places throughout the city the much-to-be-condemned practice of throwing kitchen refuse and waste water on the surface of the ground in the yard or in the street, still prevails. The disposal of garbage in every well regulated household is a matter of no small importance. From the inspector's report, I note with pleasure that the laudable practice of burning all solid kitchen refuse is being carried out by many. The removal of objectionable matter from the yards or outbuildings was enforced in all cases.

The sanitary inspector reports the following sanitary work done during the past year :—

Number of yards examined		236
"	water closets emptied	200
"	yards found in good condition	100
"	yards cleaned	400
"	hog-pens removed	26
"	notices served for dirty yards and closets	52
"	old wells closed	4
"	analysis of well water	4
"	horses buried	25
"	cows buried	8

Contagious diseases reported to the inspector by medical gentlemen of the city :—

Scarlet fever	6
Diphtheria	74
Typhoid fever	10
Houses placarded	80

Report of the expenses incurred by the Board during the past year :—

Amount granted by the Council	$350 00

Expenditure.

Printing contagious disease cards	$ 28 05
Furniture for pest house	105 19
Vaccine and vaccinating poor	25 55
Stationery for office	3 15
Removing dead animals and other nuisances	49 70
Special grant to Mr. Hughes	60 00
Rent for nuisance ground	50 00
Printing annual report	10 00
Filling up quarry hole on Waterloo avenue	4 00
Vaccine matter	4 00
Medical examination	8 00
Balance to credit	2 36
	$350 00

In conclusion, I have much pleasure in stating that the sanitary inspector has performed his duties to my entire satisfaction.

THOMAS A. KEATING,
Medical Health Officer.

KINGSTON.

Medical Health Officer's Report.

In accordance with the regulations of *The Public Health Act of 1884*, I beg leave to summarize the work done, and briefly note the sanitary condition of our city :—

The general health during the past year has been unusually good, the death-rate small, except for the few cases of scarlet fever in the beginning of the year, (the relics of our epidemic of 1885). The cases reported this year number 49, as against 296 in 1885, show conclusively that the epidemic is over.

There have been reported six cases of diphtheria, a few cases of measles, and quite a number of cases of whooping cough; also a few cases of typhoid fever, though not a single death has occurred from the latter disease.

The water supply of our city is not what it should be; the receiving pipe ought to be extended further out into the river, so as to escape every possible likelihood of contamination by the residue flowing down the stream of sewage and other pollutions escaping into the river from the asylum, penitentiary, and other sources of like character; the receiving pipe of the water works only being extended into the river about 237 feet from where the company's pumps are located, and at a depth of sixteen feet of water.

If the water works were under the control and management of the city proper, these evils might then be remedied; and, further, the mains might then be extended to parts of the city where they do not now exist, and the poorer classes of the community would then have the privilege of obtaining purer water than they can possibly now enjoy, and wells that are now in use could be closed up. Many of these wells in the upper part of the city are not fit for use, owing to the pollution of the soil from soakage of privy-pits, cesspools, cow-byres, and other such sources.

During the year past 203 privy vaults have been thoroughly cleansed out and disinfected with lime. The emptying of privy vaults has been done by the odorless system, regulated by by-law, with a fixed charge of $2 per cubic yard of matter removed. The contents are taken to the nuisance ground and there deposited in trenches, deodrized by means of quicklime, and then covered with earth.

The dangerous practice of allowing the solid contents of privies to escape directly into our drains should be remedied at once. I have prevented it being done in a great number of instances. Such a condition of things should not be allowed, on account of the filling up of our sewers, polluting the waters of the harbour, causing a terrific effluvium to escape into and vitiate the air at the corners of the streets where the sewers open, and into dwelling houses not provided with stench traps; and many such houses there are in the city.

Dry-earth closets have been instituted in places where privy vaults have been considered dangerous—that is in, small yards, etc. Twenty-three dry-earth closets have been erected this year, those having them seem to be perfectly satisfied with the improvement, and I have no doubt before the end of another year I shall be able to report a much larger number of such closets in use.

In places where shallow pits were permissable, I have caused them to be erected (in place of the deep pits so commonly used), the same made water-tight to prevent the escape of any of the contents. The main point gained in having the pits shallow is, they will have to be regularly emptied.

Garbage and dry-earth closet contents are attended to and removed daily, weekly, or as required by the parties, by a scavenger whom we have agreed with to collect and take charge of them in a proper manner. This part of the work, to do it efficiently, should be regulated by by-law of the corporation, appointing a responsible person to do the work at fixed charges, and whose duty it would be to remove the matter daily from all premises; then we would have the necessary control of the work.

The practice of throwing (as it is too often done now) kitchen refuse and slop water on the surface of the ground in yards or streets, is very injurious to the health of the public and ought to be condemned. Nevertheless, in many instances, the cause is want of drainage. Some means should be devised to remedy the evil until such times as drains are constructed.

Drainage.—Our city, until the present year, has been inefficiently drained, although the location is one capable of being easily drained, the highest point of the city being 774 feet above the waters of the lake.

There has been $7,500 spent in the construction of sewers and drains, 6,000 feet having been built during the present year, so that by the end of 1887, with the carrying out of the drains in contemplation, our city will be comparatively well drained for some time to come.

The impetus given by sanitary reform has been marked in our city by the steady and constant attention paid by individuals to keeping their places clean. The number of cellars

cleaned out, the many wells emptied, remodelled and put in better condition than they have been for many years, all go to prove that by constant attention to matters of cleanliness, etc., in the course of a short time the people will be educated in such a manner that we will not have to wait until an epidemic appears amongst us to cause our citizens to awake to the necessity of a strict observance of the laws relating to health.

Before closing, I would refer, as I have already done in my last report, to the condition of our streets. During the dry season I think they should be scraped oftener than they have been, as they are, no doubt, the cause of many diseases.

All of which is respectfully submitted.

SAML. H. FEE,
Medical Health Officer.

LONDON.

Medical Health Officer's Report.

In compliance with the requirements of the Public Health Act, I have the honor to lay before you my annual report on the sanitary condition of the city. During the year ending November 15th, the city has been remarkably free from disease. Diphtheria and typhoid fever prevailed to some extent in the 5th ward, where drainage is defective and well water in consequence notoriously bad. Still these diseases were of milder types, and more amenable to treatment than formerly. This is due to the better sanitary condition in which the city now is. No epidemic has visited the city during the year, and the mortality from all diseases was low. Consumption, as it does in all temperate climates, heads the list.

Much has been done to improve the condition of the city. Many unhealthy places have been visited by the Sanitary Inspector and myself, and many nuisances abated. Foul wells have been cleaned or filled up, and city water is gradually taking the place of impure well-water.

The construction of sewers has been pushed on as fast as possible. Sewer pipes have been laid during the year as follows: On Colborne street, from Grey to South streets; on Grey, from Wellington to Colborne; on Simcoe, from Wellington to Clarence; on Bathurst, west of Richmond; on South, from Colborne to Maitland—(this one was very much needed on account of the hospital); on Talbot, from King to York; on Kent west of Richmond; on Ridout, west of Maple, and one is now being constructed on Horton street, from Clarence to Richmond streets.

The drain or ditch running through private property from Queen's avenue to Lorne avenue in London East, is still in the same unsanitary condition it was a year ago. This drain or ditch is the cause of a great deal of the sickness in that neighborhood, and the Board of Health should take prompt measures to put an end to this nuisance once for all, either by having it done at the expense of the Board, or by compelling the owners of the property to open and maintain this drain. This can readily be done under sections 3, 5, 6 and 7 of the "Act respecting Ditches and Watercourses" of 1883, which provides that "owners of lands, whether immediately adjoining or not, which would be benefited by making a ditch or drain, or drain already made in a natural watercourse, or by deepening or widening a ditch or drain for the purpose of taking off surplus water, or in order to make the owners or occupiers thereof the better to cultivate or use the same, such owner shall open and make, deepen or widen, a just and fair proportion of such ditch or drain." Prompt action is necessary. The city has done its part by putting down a tile drain to meet this natural watercourse at Lorne avenue, and nothing remains to be done but open and widen this ditch from Queen's avenue to Lorne avenue, to make this swamp as healthy as any part of the city.

In connection with this is the growing necessity of constructing a trunk sewer along Carling's creek to connect with one from the asylum. There are two ways in which this

can be done. One would be to make a sewer along the line of the C. P. R. to connect say at English street, with one from the asylum.

The other way would be to make a trunk sewer along Carling's creek, from the river to Elizabeth street, connecting there with one from the asylum. The latter plan is the most feasible, and from present indications the Provincial Government seems desirous to assist.

Disposal of Sewage.—The Board has now under consideration the subject of devising means for the disposal of sewage, either by a process of destruction by chemicals or filtering. Several cities in the United States and one in Canada have adopted the latter process, and use the Hyatt Filter, made in Newark, New Jersey. This filter so far has answered the purpose well,—two or three of these filters put down at the intersection of the trunk lines, would be sufficient for the city. The Hyatt filter has a capacity of between 300 and 400 gallons per minute.

The by-law preventing the sinking of privy-pits is, although meeting with some opposition, being enforced, but there is a matter connected with this to which I wish to draw the attention of the Board. As the law now is, these closets are not allowed to be placed nearer a dwelling than fifteen feet; that is all very well, but many of these closets are placed immediately against the line fence, right in front of his neighbor's dining-room or kitchen windows. This is a grievance, and should be remedied by placing these closets at the rear of the lot, an equal distance from his neighbor's fence.

The Disposal of Garbage must sooner or later engage the attention of the Board. As it is now, garbage is dumped here, there and everywhere, to the great annoyance of the public, and as the city does not possess a farm for this purpose, destruction by fire is certainly the next best method. For this purpose a crematory would be necessary. These are now used in many cities and towns in England. One large enough for this city could be built for about $2,000; very little fuel would be required, the crematory making its own fuel by first drying the garbage in a kiln placed over the furnace, and would only require the services of one man. In the meantime it would be well to procure some place or places where this refuse matter could be deposited.

T. O. HUTCHINSON, M.D.,
Medical Health Officer.

Ottawa.

Medical Health Officer's Report.

I beg leave to lay before you my annual report for the year ending on October 30th, 1886.

In doing so it is satisfactory to be enabled to state that at no time during the year has there been in our city anything like an approach to an epidemic of any contagious disease with the exception of measles, which prevailed extensively during the latter part of the winter and in the early part of the spring months.

Notwithstanding this fact, however, the mortality for the last twelve months, as will appear from mortuary returns here given, has been larger by 208 deaths than during the corresponding period of the year 1885.

This increased mortality, however, is not always an exact test of the sanitary condition of a city, so far as it is influenced by the labours of sanitary organizations. It may be, as it was in our case, partly the result of influences not altogether controlable, and partly due to legitimate causes.

Out of this increase of 208 deaths, 127 were of infants cut off during that critical time of their development, commonly known as the period of dentition within the two first years of existence.

Though it must be conceded that the death rate of infants will of a necessity be larger among those who are less favourably situated, whether as regards the conditions of the dwelling house and surroundings, or other requisites of the laws of health which money

can procure, there is no reason that in a young city like ours, where little or nothing is known of that overcrowding of people and squalid poverty, which are seemingly the inevitable inheritance of older cities and larger aggregations of people, why so great a mortality should exist amongst infants. The foundling institution in our city, no doubt, largely contributed to swell the death roll of infant mortality, and can legitimately be considered as instigating to a considerable extent this unenviable record. But aside of this, the mortality of infants in our city is larger and much beyond what should be reasonably expected ; and I have no hesitation in stating that to a very large extent, indeed, it is the result of ignorance or criminal indifference of parents not to care as they should for their infants at that particular time of their existence, either as regards proper food or otherwise.

Deaths resulting from diphtheria during the period comprised in this report, were also in excess of those occurring last year.

That our sanitary condition, knowledge of the laws of health and conformity of conduct thereto, will ever be such as to leave the community altogether free and incapable of fostering the development of any such maladies, is beyond our expectations ; but their victims would undoubtedly be very many less, were not the public generally (there are exceptions) so wilfully indifferent in taking necessary precautions to prevent their spread, and so obstinately refuse compliance with that rule of health laws exacting notification of health authorities of the existence of any such case in any household. Typhoid fever, also, has been somewhat more prevalent during the latter part of last summer and fall than during the corresponding period of the previous year. This, I think, to a large extent may be attributed to atmospheric influences and to the upturning of the soil necessitated by the extensive subsidiary drainage, and other sanitary works of improvements going on in every part of the city. Smallpox, during the last year, has also added its victims to the mortuary list ; and though the number of cases of this disease was not very large, the death-rate among them was more than the usual average—due partly to the fact that a large number of them were adults under the most unfavourable condition.

As regards this, however, though the community may justly deplore the loss of those who fell victims to this loathsome disease, it has good reason to congratulate your Board and the Provincial Health authorities in so successfully staying the ravages of this pestilence to so limited a few, in view of the fact that for many months our city had been daily and in many ways assailed by external sources of infection. Then, again, as a last factor, and a normal one in our increased mortuary returns, our natural yearly increase of population should not be ignored.

The many cases of so-called preventable diseases occurring in our city during the year, are no doubt a pretty sure measure of its sanitary condition, which evidently leaves us yet much to be desired, and offers a wide field of labour to be done. It cannot be denied, however, that last year was for Ottawa an epoch marked by substantial progress in that which is the very basis of sanitation. I refer to the completion of the subsidiary drainage in a large extent of the city, St. George's Ward in this respect taking the lead, being now almost from end to end compassed by a perfected system of sewers.

The replacing of the old key-stone drains on Sussex and York streets by properly constructed sewers, should be duly appreciated by the inhabitants of that section of the city, not only removing what must have become in the near future a prolific source of disease, but also as a work which now affords them all facilities for the drainage of their property, as well as the adoption of modern accommodations in the dwelling-house. This improvement, I am happy to note, has also enabled the corporation to efficiently drain the public market in that part of the city, a want long and sorely felt by many, and by none more than by the health authorities themselves.

The privy-vault, or pit, which prevails so extensively throughout the city, has been last year, as in the past, the most frequent nuisance complained of. Many are old and decayed, and many more are defectively made, allowing contents to escape in the soil which becomes saturated with the offensive matter, and in due course of time is a source of unhealthiness ; in thickly populated districts privy-vaults are dangerous and should go.

In by far too many places yet, even in the most important business portions of the city, the all permeating offensive privy-vault retains its place : proprietors of such should now realize the necessity of replacing them with the more modern and safer appliances, in compliance with the requirements of the lives and laws of sanitation.

The time has arrived at all events, and the proportions attained by our city such as to justify the hope, that at no distant day special sanitary regulations will compel owners of property in certain sections of the city, when our system of sewers have been perfected to do away with the privy-vault, leaving in its stead the water-closet or the dry-earth closet, which can be made to serve equally well the purposes of sanitation.

The removal of night-soil, which last year dragged throughout the whole year instead of being done within a certain time specified by contract, was as usual under the supervision of two inspectors, corporation employees, who are watchfull that this work is done in a proper way, and that just remuneration only is demanded in payment thereof. The difficulty of procuring dumping ground having been got over for a few years at all events, it is to be hoped that this work will be done more promptly during the winter months, thereby avoiding a great deal of dissatisfaction to the public and annoyance to the health authorities. The disposal of household garbage which, in a sanitary point of view, is a matter of much importance in our city, is as yet very unsatisfactory and a very frequent source of serious trouble to many householder. The organization of a proper system of scavenging is here much needed, and its establishment very anxiously looked for at no distant day by a large portion of the community.

The house to house inspection, with a view of enforcing cleanliness of yards and premises this year, was not I fear as satisfactory as it could have been desired, owing in a great measure to the fact that the removal of night soil extended during the summer months, occupying, therefore, a great deal of the time of the inspectors. In connection with this, I would respectfully recommend a most thorough house to house inspection next year, not only with the object of enforcing cleanliness by the removal of offensive matter from yards and premises, but specially with a view of enforcing proper private drainage wherever our public sewers have been perfected, and the placing of sinks in dwelling houses, thereby doing away with the very objectionable practice of throwing the house slops and waste water on the surface of the ground, at the back kitchen door or on the street. All complaints of nuisances, however, have been attended to as promptly as circumstances permitted ; and next year I am confident will inaugurate a more efficient system of working, which will no doubt be more satisfactory to the Board of Health, whilst it will also prove more conducive to the public welfare.

The isolation of persons suffering from contagious diseases, when known to me, has been duly carried out, either at domicile or in hospitals specially maintained for this purpose, and the public impressed with the vital importance of this measure ; but the fact is, that with the exception of Smallpox, the public seemingly have not yet realized that they are in duty bound by health laws to notify health authorities of the occurrence of any such diseases as Diphtheria, Scarlet and Typhoid fevers. It will be my duty, however, to wake the public up to a sense of their responsibilities in this matter ; and it is my firm resolution in future to inforce this measure, which wisely looks to the interest of the unfortunate who may be so afflicted, and provides as well for the safety of the whole community. The alarm caused some months ago by an outbreak of Smallpox having passed away, little is heard of vaccination now ; and the law compelling parents to have their children vaccinated is ignored, until such time as another panic causes another rush for the doctor's office, forgetful that prevention is a thousand times better than cure, and that safety is the reward of eternal vigilance. To remind the public of their duty in this all important question, I would most respectfully recommend that during the winter months a thorough inspection of all the schools in this city be made, with a view of having all children bearing no marks of previous successful vaccination submitted to this measure of prevention. Mortuary returns here attached have been as carefully made by me as it was in my power to do ; the fact, however, that the cause of death is in many instances given by incompetent persons and consequently incorrectly given, detracts very materially from their value or usefulness in preventive medicine.

This serious defect will only be remedied when blank forms are supplied to all the practicing physicians of this city, who I have no doubt would faithfully and correctly record the cause of all deaths occurring in their practice.

Respectfully submitted.

A. ROBILLARD,
Medical Health Officer.

ST. CATHARINES.

Chairman's Report.

In accordance with the provisions of The Public Health Act of 1884, I have the honour to submit the third annual report of your local Board of Health for the year ending 30th November, 1886.

Attached hereto is the report of the Sanitary Inspector, giving a detailed statement of the duties performed by him, also an account of the work done by the city scavenger.

Your Board continued, during the season, from November, 1885, till May, 1886, the work of cleaning cesspools, privy-vaults, etc., the work being done in a manner generally satisfactory to the public, and at a more reasonable figure than formerly. This season the Board has arranged for the removal of night-soil, etc., on a basis which will meet with the approval of all classes, viz., a barrel system. The Inspector's report will show the quantity of night-soil, etc., removed from the city during the past year.

The Inspector has made regular tests of the milk offered for sale by the licensed vendors, and has noted a decided improvement in the quality.

Frequent inspections have also been made of the cow-byres, which are found to be clean and well kept; the quality of food furnished the cows good and wholesome, and the condition of the cattle all that can be desired.

Slaughter-house inspection has also been carried on, these places being kept in a very satisfactory condition.

One of the greatest sources of trouble which the Board has to deal with is the pig nuisance; and we would recommend that The Public Health Act be so amended as to prevent the keeping of hogs within city limits.

The streets, lanes and alleys have been kept very free from garbage and filth, although the Inspector has been compelled to threaten legal proceedings against several persons who habitually break the law in this respect.

The Board has been put to considerable expense during the year in the removal of dead animals from off the streets—cats, dogs, and in one instance a horse had to be removed at public expense. the Inspector being unable to discover the owner.

During the year the Board of Works has had traps placed in the catch-basins of the King and Queen street sewer (as recommended in our last report), with the erection of an automatic flushing tank at the head of this drain; and the discharge of its mouth carried into level one below lock No. 2, (which we believe the Board of Works contemplate doing as soon as the weather will permit), serious cause of complaint will have been removed.

The health of the city during the past year has been very satisfactory, the total number of burials being 174.

On the 4th January last, a report was sent to the Board of Health that a girl belonging to a poor colored family on North street, was sick with symptoms of smallpox. A physician was sent at once to see the case, who reported that the patient was suffering from that disease. A special meeting of the Board was called, and it was decided to remove the whole family of a mother and five children to the hospital. This was done at once, and the late Dr. Sullivan, a member of the Board, given charge of the patients. The whole family contracted the disease, but all recovered. They received, at public expense, medical attendance for thirty-nine days. During their occupancy of the hospital the mother was confined, but the infant did not contract the disease.

After the hospital had been thoroughly cleaned and disinfected, the services of a caretaker was secured, who now resides in the building, and to whom is paid a nominal sum.

During the year the Board met with a severe loss in the death of one of its members, the late Dr. Sullivan.

In conclusion the Board would congratulate the citizens on the absence of any epidemic during the year, and on the general healthfulness of the city.

The Sanitary Inspector has continued to perform his duties to the satisfaction of the Board.

All of which is respectfully submitted.

GEO. C. CARLISLE,
Chairman.

TORONTO.

Abstracts from Report of the Board and of the Medical Health Officer.

Your Board beg leave to submit, for the information of the Council, a brief resume of its work during the year 1886, and would ask that the same be transmitted to the Provincial Board of Health, as required by the provisions of the Public Health Act.

When the Report of last year was closed there were but two cases of smallpox remaining in the city; but, unfortunately, the germs of the disease had been disseminated from intercourse with the Province of Quebec, and in consequence of the malady having been concealed in a family, it appeared again and again in different parts of the city. The disease never assumed by any means the character of an epidemic, but at one time considerable anxiety was felt because of its repeated appearance, owing to not being able to trace the origin. It being quite apparent to your Board that some unknown centre of contagion existed, diligent steps were at once ordered to be taken to discover its whereabouts, which eventually proved successful. A young woman, a tailoress, had contracted the disease in a mild form, and several members of the family with which she was living became affected; meanwhile, she was working daily at the shop with the smallpox virus about her person; in that way the infection was carried to various parts of the city.

The total number of verified cases of disease during the period extending from the 9th of August, 1885, to the 10th of February, 1886, was twenty-eight. All but the first two (a child and its mother) were cared for at the Smallpox Hospital, the total number of deaths being three.

491 visits were paid by order of the Board to quarantined families; 20 houses were disinfected, and 60 cases were reported which required watching, involving over two hundred visits by the Medical Health Officer and his assistants.

In the early part of the year free vaccination was provided, medical assistants being appointed by your Board to vaccinate all applicants, at the Medical Health Office daily, and at the St. Andrew's and St. Paul's Halls, and the Wilton Avenue Fire Hall, every other day from 2 to 5 p.m. In addition to the above, the Board felt it necessary to open an additional vaccination station in St. Matthew's Ward, in all some 15,000 persons being thus vaccinated free of charge.

There seems to be an idea prevalent among the public that vaccination is not compulsory, and order in to remove any doubts that might have existed the Board had large posters printed and distributed throughout the city, informing the citizens of the provisions of the Public Health Act relating thereto.

In their house to house inspection the inspectors reported that there were no less than 4,116 persons who were never vaccinated, and 11,024 who had not been vaccinated within seven years, and this applies to about one-half of the City which only was inspected.

On the 30th March six policemen were placed at the disposal of the Board as sanitary inspectors, and in addition the Board appointed four or five others. They proceeded to make a house to house inspection, bringing to light the existence of many sanitary evils, the majority of which your Board has successfully removed. The good results of a house to house inspection cannot be too highly appreciated.

On the 18th of February your Board found it incumbent upon them to request the Water Works Committee to place water mains on all the streets of the city which were not provided with the same. The City Council had not the funds, unfortunately, to meet the necessarily heavy expenditure connected with so great a work. However, a good work has been done by the city in this direction, a large sum was obtained and a very great number of mains were laid. This recommendation was made with a view to ordering the closing up of all the wells in the city, as they cannot, no matter how great care is taken of them, be pure and fit for human consumption in the crowded parts of a large city.

It was recommended by the Board on the 13th March last, that connection should be made where practicable between the draughts of boilers and the public sewers, with a view to their ventilation. The Board regrets that this has not been carried out.

It having come to the knowledge of your Board that a very large number of houses and lots were unprovided with drainage of any description, it was ordered that all buildings and vacant lots be forthwith drained into the city sewers. That this order is being carried out as rapidly as possible, it may be mentioned that the Board of Works Department has been unable to keep pace with the demand for private drains.

It was also reported to your Board that a great many privy vaults in the city had not been cleaned out or disinfected for years. As such a state of things could not be tolerated, your Board at once took steps to notify the public that all privy pits in the City must be cleaned out and thoroughly disinfected before the first of July in each year. The Board also forbade the public, in the future, to place such vaults on their premises, but to use in future proper modern sanitary appliances.

The Island opposite the city having become a great resort for camping parties during the summer months, great complaints were made by the residents thereof that the campers were not supplied with proper means for removal of excreta, etc. It was, therefore, ordered by the Board that no camping parties be allowed on the Island unless they were provided with earth closets, and it was recommended to the Property Committee that a small sum should be paid for the privilege of camping thereon. The object of the charge was to provide a fund for the purpose of meeting the expense of furnishing the earth, which had to be brought over from the city. The scheme was found to work admirably, and no complaints have since been heard from Island residents in this particular.

The inspectors in making their rounds discovered that the site for the proposed new Court House had been left in a most filthy condition, the cess pools, etc., not being cleaned out and filled. The Board at once took the matter in hand and had the site placed in a cleanly position.

The Board was waited upon by a deputation of citizens residing on Concord and Ossington Avenues, who stated that they were unable to procure water for their premises, there being only one well on the two avenues, and that of doubtful purity, to supply the inhabitants thereof. A sample of the water from this well was obtained and forwarded to Mr. Thomas Heys for analysis, who reported that the water was unfit for human consumption. Accordingly, there being no other alternative, the Board requested the City Council to lay down water mains upon these avenues, which was done, and the inhabitants have now a supply of good city water.

A lengthy communication was received by your Board some time during the month of May from the Provincial Board of Health, complaining of the unsanitary condition of the Western Cattle Market. The Board at once ordered an inspection of the premises, but the Medical Health Officer could find nothing of an alarming nature, as set forth in the communication of the Provincial Board of Health. Wishing to satisfy themselves that the report of the Medical Health Officer was correct, the Board undertook a personal inspection, which resulted in a confirmation of the Medical Health Officer's report. As a consequence, the facts thus ascertained were forwarded to the Provincial Board of Health, the communication also stating that it was the intention of the City Council to

spend a large sum of money in modernizing and improving the market, which your Board is glad to be able to report is now being done, much to the convenience of cattle buyers and the public generally.

The attention of the Board having been repeatedly called to the condition of the building known as the "London House," has requested the City Solicitor to at once take legal proceedings against the owners and lessees of the premises to at once compel them to place them in a thorough sanitary condition. Proceedings are now pending, as also against the trustees and proprietor of the New Arundel Hotel, and the owners of several premises on Duchess street.

A By-law was introduced by your Board and adopted by the City Council amending the By-law now in force in every Municipality as appended to the "Public Health Act," the object of the By-law being to prevent the running of blood and offal into the sewers of the city from the slaughter houses, and to compel the removal of the same in air-tight vessels. The By-law also enacts that the slaughter houses are to be provided with a tight non-absorbent flooring running to a centre, so that all the blood, etc., may be easily collected and removed, and with a supply of city water, for the purpose of thoroughly flushing it each time the same is used.

A By-law has been under the consideration of your Board for some time respecting the licensing of plumbers. The Bill, which has received most careful and thoughtful consideration, will be introduced to Council at its next meeting, when it is hoped it will become law.

The attention of your Board has been frequently called to the fact that there is no By-law regulating the drainage of land and buildings. It is proposed, therefore, at an early day that a By-law be introduced for the purpose of regulating the same.

The fact that the Smallpox Hospital is situated in one of the most beautiful and largely growing portions of the city, has caused the Board much anxiety and thought. On several occasions the Board spent days looking at what were suggested as suitable sites for the removal of the hospital. None, however, were secured, and it is recommended that it be a matter of earnest consideration for the next Board.

The attention of the Board having been called to the state of the Rosedale Creek, an inspection was ordered. The report of such inspection was to the effect that "Rosedale Creek, from Avenue Road to its mouth, where it empties into the Don, shows it to be nothing better than an open sewer." The matter was referred to the Committee on Works, who have recommended that a sewer be made of the bed of the creek. Your Board would urge the immediate adoption of the necessary steps for abating a sanitary evil fraught with so much danger to the large section of the community resident in its vicinity. In the meantime it remains a source of danger to persons residing in its neighbourhood.

Frequent complaints having been made to your Board as to the unsatisfactory condition of the privy and water closets at the Public Schools, an order was issued to the School Board requesting them to do away with said privies and water closets, and to provide in their stead a proper system of sanitary improvements. The School Board evidently did not think the matter of much moment, and did not even treat this Board with the ordinary courtesy of an acknowledgment of the receipt of the communication. However, this Board has since issued a preemptory order, which, if not attended to forthwith, will compel this Board to take upon itself the enforcement of the order.

Notices have also been sent to the Separate School Board, University College and High School authorities, asking them to do away with privy vaults, and substitute therefor proper sanitary appliances.

Respectfully submitted.

P. H. DRAYTON,
Chairman.

Board Room,
Toronto, November 15th, 1886.

Report of Medical Health Officer.

To the Chairman and Members of the Local Board of Health:

GENTLEMEN,—In February last, after the organization of the present Local Board of Health, I submitted the following recommendations as being of immediate importance :—

1. The placarding of houses in which exists either smallpox, scarlet fever or diphtheria.
2. The drainage of every lot and house within the built-up portions of the city.
3. The closing of all wells and cisterns.
4. To abolish all privy pits.
5. The appointment of a sanitary inspector of new buildings.
6. The appointment of a competent inspector of plumbing.
7. The work of house to house inspection to commence by the 1st of April.
8. Proper provisions to deal with the excrement upon the Island during the summer.

These suggestions having been considered by a sub-committee, it was resolved that it was not expedient to placard infected houses, as the course at present pursued by the Medical Health Officer accomplished the same purpose. Soil and house drainage was to be insisted upon as far as possible. That all wells with impure water and foul cisterns were to be closed. That the closing of privy pits was to be urged, and new ones not to be allowed until the approval in writing was obtained from the Medical Health Officer. The appointment of an Inspector of plumbing was deferred, as well of new buildings. The recommendation regarding the Island was adopted; also that the work of house to house inspection should begin by the 1st of April.

Sanitary Police.—In the summer of 1883 Major Draper, learning that I had no sanitary inspectors, offered the services of a number of policemen for the work. The very valuable services rendered by them that season was duly acknowledged. Again, during the summer of 1884, eight policemen were detailed to perform similar work, which was done most satisfactorily. In 1885, instead of policemen six sanitary inspectors were appointed by the Board. But during the past summer I have again had the services of the police. On the 30th of March six policemen reported for sanitary duty. The work allotted to them was to attend to complaints of sanitary evils, and make house to house inspection. The house to house inspection on the previous year was commenced at the front and proceeded northward until the close of the season. This year the work was commenced at the streets where it terminated last year. The work of the police was divided into three districts, with two police inspectors to each division. They were instructed to attend in the first place to all the complaints, or specials, and then to devote the balance of their time to house to house inspection.

They have continued on sanitary duty up to date except about ten days in May, when they were withdrawn for other special work, and in September, when for twelve days they were on general duty on account of the Industrial Exhibition.

Preliminary Report.—They were directed first to take a survey of their respective districts and furnish a preliminary report.

New Buildings.—Before proceeding with the general work, they made an inspection of new buildings, either completed or in the course of erection, in respect to the general sanitary condition, especially the provision made for drainage and the disposal of excrement. The total number of new buildings visited was 405. Of these 329 were found to be satisfactory, 67 medium, and 9 bad.

Instructions to Sanitary Police.—Beside verbal instructions these following were given in writing :

1. Give the street and number.
2. The name of owner or agent.
3. The number of inmates.
4. Whether there is a soil or house drain.
5. The source of water supply.
6. The mode of disposal of refuse.
7. The situation and condition of privies.
8. The state of stables, disposal of manure.
9. In factories—number employed, privy accommodation, whether separate for females.
10. What sickness has occurred during the past year. Number of deaths and cause
11. Number never vaccinated, and number not vaccinated within seven years.

Special Cases attended to by the Sanitary Police.—From the first of November, 1885, to the first of April, 198 complaints were attended to by the one sanitary inspector. After the police commenced work these cases were attended to by them. The total number from 1st of April to date is 2,918. Total during the year 3,116.

The sanitary inspectors were instructed to inspect the places complained of. Then, when any sanitary evil was found, to ascertain the responsible party, and if possible see him and state the matter to him, and what was required to be done, and learn if he would at once abate the evil. To do this it was often necessary to make several visits. Of course, this occupied a good deal of time. But the policy pursued by the Medical Health Department has always been to try to have evils removed by persuasion, and in educating the citizens to recognize the necessity of so doing. This course has proved very satisfactory. In a certain number of cases the responsible party could not be found, perhaps from being a non resident. In such cases an official notice was mailed to him. In a certain number of other cases the responsible party would not attend to the requirements of the law, and an official notice was likewise sent to him. During the year 462 of these official notices have been issued ; of this number 456 have been sent since the first of April. These notices explained the nature of the evil and specified the time permitted in which the work had to be done. After a time the place was re inspected to ascertain if the notice had been attended to. In about 200 instances it was found that the evil had been promptly removed. Many more were subsequently found to have been made satisfactory. When it became apparent that the responsible party would not attend to the behests of the law, he was indicted before the Police Magistrate. This work has been in the hands of Inspector Copping, of the City Commissioner's Department. Altogether he has had 52 cases. Of these 48 cases were, under the pressure of the law, duly attended to.

Inspection of Slaughter Houses and Butcher Shops.—On the 15th of April the sanitary police were instructed to make a thorough inspection of the slaughter houses and butcher shops within the city. The number of slaughter houses reported as existing was 25. Of these, only 5 were found in a satisfactory condition, 14 being unsatisfactory, and 6 doubtful.

The reports upon the butcher shops stated that out of 143, the total number inspected, 105 were found in a satisfactory state, and 38 unsatisfactory. It was admitted at 18 places that slaughtering of calves and sheep occasionally took place. A circular was issued, dated May 10th, 1886, to every proprietor of slaughter houses and butcher shops reciting the law regarding them, and informing them that the law was to be

diligently enforced. This notice failing to produce any effect, an inspector was directed to notify each one personally. Even this failed to arouse those addressed. On the 11th of June a communication was addressed to this Board upon the matter, pointing out that mostly all of the proprietors of slaughter houses had failed to observe the requirements of the law as to distance of slaughter houses from dwellings and the street, and recommending as the surest remedy that one or more public slaughter houses should be established, and the private ones closed up. At last the butchers were aroused to action. They convened at the Medical Health Office where the matter was discussed. Afterwards they had a conference with Mayor Howland. Since then the butchers have formed an association, and have shown a commendable desire to meet the requirements of the Public Health Act. In fact, they have rendered valuable services to the Department by appointing an inspector, and by causing all the butchers to place their premises in a proper sanitary condition. Printed permits are now issued from this office upon application, and after due and satisfactory inspection has been made. In furtherance of this necessary reform a by-law was introduced by the Board.

On the 28th of May the Inspectors were instructed to visit and report upon all the places where milk is handled or sold, stating :—

1st. Where the cows are kept.

2nd. The condition of vessels in which the milk is carried or kept.

3rd. The source of the water used for washing vessels.

4th. The state of the premises.

5th. Examine the ice in use, and learn where it was cut.

6th. To give instructions where necessary, and insist upon thorough cleanliness.

One hundred and forty-five places were visited. Of these ninety-seven were found satisfactory and forty-eight unsatisfactory.

In a few cases it was found that well water was used for washing milk vessels. In these cases the water was examined, and invariably it was found unfit for the purpose. Consequently the proprietor was required to put in city water and close the well.

The arrangements in use by the several night soil excavators, in what manner the work was conducted, with regard to the vehicles, mode of removal, and as to place of deposit, received due attention, and instructions were given as to the best way of doing the work without causing a nuisance.

Inspection of Ice—On the 27th of July the Medical Health Officer inspected the character of the ice used by butchers who employ it to preserve food, with the special object of learning if impure ice was placed in contact with food. The result showed that at thirty-eight places the ice was clean, at thirty-nine doubtful. But in only four places was the ice in contact with food.

On the 19th of July inspectors were instructed to make an inspection of all the Public and Separate School buildings within the city, and report as to their sanitary condition.

1st. As to the kind and state of the building, condition of the basement, nature of the drainage, etc.

2nd. The kind of privies, and their condition.

3rd. Nature of the water supply.

4th. The condition of the ground and premises generally.

The reports were not altogether satisfactory, and were made known to the Chairman of the Public School Board, and steps were taken to have all sanitary evils abated. It was recommended that the Board should supply the caretaker of each school with a plentiful quantity of disinfectants, to be freely and frequently used.

The House of Providence was also inspected, and from time to time private premises. The most important of these was on Cecil street, where there was an alarming outbreak of diphtheria in April.

An inspector made an investigation regarding the outbreak of diphtheria, which led to the closing of Phœbe Street School.

Infectious Diseases.—An inspector was detailed, by order of the Board, to look after contagious and infectious diseases. Not only those reported by physicans and the School Board are attended to, but every supposed case, however it may be reported, is promptly investigated. In every case of typhoid fever and diphtheria he inspects the house and premises, and reports their condition. When they are found in an unsanitary condition, they are dealt with as specials.

Diptheria and Scarlet Fever.—At the beginning of the year both scarlet fever and diphtheria were somewhat prevalent, and in a number of instances the physician reporting the disease, gave as the source, "the school at which the child attended." Consequently, a communication was addressed to the Chairman of both the Public School Board and the Separate School Board, asking that the head master of each school be instructed to be watchful at the re-opening of the schools after Christmas holidays, and to exclude children from every house where those diseases existed. Other precautions, as well as these, have not prevented an unusually large number of cases of diphtheria, though doubtless the number was thereby lessened. The disease may be due to some local cause, or it may be exposure. The disease is infectious, and may be contracted from one affected, or the virus may be carried by a person and communicated to another. However, it is very important that no communication should be had by school children with an infected house.

Mr. George McMurrich, immediately after he became Chairman of the Public School Board, expressed his desire to co-operate with me in preventing the spread of contagious diseases among the school children. The system adopted is as follows: As soon as a notice of infectious disease is received from a physician at the Medical Health Office the Inspector of Public Schools is notified of the fact and also the school attended by the family affected. The Head Master of that school is then in turn notified, and who has instructions to exclude all children from such house until a certificate is presented from a doctor that there is no danger of infection. It is a matter of some consequence with which this Board, I fear, will have to deal, that some of the physicians of Toronto fail to report cases of infectious diseases occurring in their practice. In passing I would say that I think this failure is due to forgetfulness more than anything else. Nevertheless a single failure may be the means of a serious outbreak, and the physicians should respect the behests of the law. (The alarming prevalence of the disease in the neighborhood of Phœbe street, which necessitated the closing of the school there, I fear was in a great measure due to the failure of *a physician* to report a case on Markham street). To meet this want of attention on the part of the doctors, (by arrangement made with the Chairman of the Public School Board), the several Head Masters, when a case of infection is reported to them, at once notifies Inspector Hughes at the School Board Office, and the information is at once conveyed to the Medical Health Office.

The Inspector for this work at once proceeds to investigate. He visits the house, ascertains the facts, and, if the report is verified, he learns the name of the physician attending, and then takes to him a blank form to properly report the case. By these means there is afforded very full protection so far as school children are concerned. Fortunately a good many of the cases reported by the school masters are found upon investigation to be false alarms. But nevertheless it is most important to have such reports, that investigation may take place. In many instances these reports have enabled the inspector to reach the physician attending the case who had been remiss in reporting as the law requires. The Health Inspector who has charge of this work, no matter from what source the information comes, at once visits the house where the disease exists. He ascertains if the disease had occurred there. He notifies the inhabitants on either

sides of the house, also the nearest grocer or butcher. This procedure, perhaps, accomplishes all that could be gained by placarding the house. The inspector ascertains whether the family has any book from the Public Library, and if so, the Secretary is notified, who has orders not to receive any book from the house without a medical certificate that it is free of infection. In cases of diphtheria and typhoid fever, the house and premises are inspected, so that any sanitary evil may be abated.

All of which is respectfully submitted.

WM. CANNIFF,
Medical Health Officer.

TOWNS.

Brampton.

Secretary's Report.

I learn from our Sanitary Inspector's report—we have no Medical Health Officer—that the sanitary condition of our town is good, and that it has been well attended to during the year. No serious nuisances have been complained of, nor have we had many cases of infectious or contagious disease.

Chatham.

Chairman's Report.

In conformity with the statutes defining the duties of the Chairman of a Local Board of Health, I hereby briefly bring before your honourable body a synopsis of what has been effectually carried out by the Board during the year ending October, 1886, and some few suggestions for the near future.

It must be very gratifying to your honourable body to learn that the health of the town has been comparatively better since my last report than what it had previously been.

The mortuary returns show a death-rate of about 15 per 1,000; Chatham returning a lower average than 15 out of the 19 cities and towns in the Dominion, compiling statistics in this way. This is in a great measure, no doubt, due to the efforts of the Board of Health, and the effects of carrying out of sanitary measures and precautions through your very efficient and able officer the Sanitary Inspector, who has, for the year just closed, attendnd promptly to having all water-closets, pig-pens, wells, cellars, and manure pits cleaned out where their condition demanded it for the safety and preservation of the public health. He also keeps a strict record and proper supervision over all milk vendors. The latter is all the more essentially necessary, when we consider in how many instances the germs of disease are carried in milk.

We have had reported this year ninety-three cases of contagious diseases by the town physicians, (who report willingly and cheerfully to the Inspector direct), and as several cases very often occur in the same family, the points of contagion would not be more than, say forty families; of these a very small percentage were fatal, showing that we have had no one form of disease spreading, as bad forms of epidemics usually do, to complete their fatal work.

You will no doubt remember a scavenging by-law was prepared by the Local Board of Health, and passed by your Honourable Body early in the season. The writer is happy to be able to report favourably upon the working of the same. What was hitherto a most hideous, loathesome and nauseous process at night, is now odorless and inoffensive to the health of the town and executed in the daytime. Sleep, before the passing of this by-law, prevented the olfactory nerve from rebelling at its non-removal, and consequently allowed many an inhabitant to innocently inhale these noxious gases from night-soil that are now rendered inocuous by disinfection.

As malarial diseases are among the most prevalent forms of diseases in our town, and as the cause of the above is beyond dispute the decomposition of vegetable matter, heat and moisture being necessary thereto, the Board of Health hail with delight the amount of drainage introduced by the present Board of Works. May I here suggest, that in my opinion all drains should be properly trapped at all uprights, thereby preventing a wholesale poisoning of those in the vicinity of the uprights by noxious and poisonous gases generated in said drains. These traps can be put in at less cost when the drain is being constructed than at any time afterwards, and fully carry out an old and true adage, "What is worth doing at all is worth doing well."

Healthy as our town is, it can, no doubt, be very materially improved by a properly established system of water supply. The present source is very defective, allowing by soakage the germs of disease from our privy-pits and sewage to contaminate the very water we are daily consuming. To obviate this somewhat, the Board took advantage of Clauses 14 and 15 of the Act compelling all persons building new closets or replacing defunct ones to make the new ones water-tight, pits underground or dry-earth closets. These permits are obtained from the Medical Health Officer (Dr. Hall) at his office. About thirty of these have been granted during the summer.

As to the best means of water supply it is a moot question at present. The filtering of the waters of the Thames, I think, would be an injudicious experiment, as to cost probably not less than by bringing purer water from the Chenal Ecarte, it is doubtful whether or not by a filtering process (which is apt to be run and managed improperly, by reason of a too unfrequent removal of the filtering medium used), the disease germs could be removed so as to be compatible with health, which the Thames water is alive with, containing as it does the sewage of London and several small places below it; also any abundance of decaying vegetable and animal matter from other sources. If this were possible in summer it would not be so in winter, when the river is frozen over and not exposed to the oxidizing effects of the atmosphere.

I think, of the comparative merits of the waters of Lake Erie and river Chenal Ecarte, the saving in cost of construction and after maintenance would be in favour of the latter source, owing to the distance that clear water is reliably and continually found from shore, and difficulty in keeping a crib in the lake so far out.

As to Artesian wells I may say, that for supplying each private family by such a well, I think the scheme, if pretty universally adopted, would nearly approach to a more perfect system of water supply.

Councillor Malcolmson, Mr. Andrews, an expert from New York City, and the writer, spent considerable time in visiting the most noted flowing wells in Raleigh Township, and gathering information from all other possible sources at our command on the subject, with the result of receiving an adverse opinion from Mr. Andrews on the feasibility of a scheme of supplying Chatham with a system of connecting a gang of artesian wells, as in vogue at present in the cities of Albany and Brooklyn.

As Chatham would require nearly one million gallons per diem, Mr. Andrews stated that unless some convenient point could be found in or about Chatham, with from at least two or three feet of coarse gravel immediately over the rock, that the supply would not be sufficient, or if sufficient, if taken from a quick sand layer over the rock would yield riley and dirty water, under his or any other system of pumping by steam power, and consequently be unfit for drinking purposes, and soon choke up the conduit pipes.

Although water may look pure and clear and be palatable, yet it may contain the germs of typhoid fever, diarrhœa and other diseases; hence the importance of having the source or sources of our water supply above suspicion; and more particularly would I

like to see the town, through your Honourable Body, set apart an appropriation sufficiently adequate to procure a comprehensive report, in detail, from some competent engineer as to best source, cost of construction and maintenance of same.

I venture to say that, without burdening the people beyond their ability and willingness, the same could be made self-sustaining, and the people would be benefited at the expense of sickness, death and the doctors, and would have all the immunity from contagious diseases that such a system of good and pure water supply could alone give them. Just think of 200 tons of excreta and sewage, worth $30 per ton, if used for fertilizing purposes, being allowed to percolate the porous soil of Chatham every year, to contaminate our wells and our present drinking water supply.

Hoping you may see your way clear to take some action to remedy this evil by giving it your undivided attention and support,

JAMES P. RUTHERFORD, M.D.,
Chairman, Board of Health.

GALT.

Medical Health Officer's Report.

As Medical Health Officer for the town of Galt I have to congratulate you on the sanitary conditions of the town in general. It is a matter of thankfulness that during the past year our town has not been visited by any wide-spread cause of mortality or sickness, beyond the ordinary causes that are at work from year to year, over which we have little or no control. In comparing our statistical standing with other towns of similar population we stand third on the list, our death-rate being sixteen per thousand. Of the *ninety-five* deaths occuring in the past year—under 5 years, 32; from 5 to 20 years, 9; from 20 to 40 years, 18; from 40 to 60 years, 15; and over 60 years, 21; showing a very large number, nearly one-quarter, that arrived at a good old age.

The report of the chairman of the Board of Health embraces about all the information as regards the number of cases of typhoid fever and diphtheria we have had reported during the year, eighteen of the former and thirty-eight of the latter; but this, I am sorry to say, does not embrace all, as many cases have not been reported. There was no deaths from typhoid fever, and only three from diphtheria, showing, I think, in a measure that neither have been of a very malignant type.

It is a matter of regret that the town is not in a position to adopt a system of water-works and drainage, as nature has done so much to assist us in getting rid of a great deal of effete matter by means of the river, which might, with small cost, be made to run much more rapidly than it now does, and thus keep a steady current and no stagnant water.

General vaccination was so thorough last year that there were but few left for this season, and these, I think, have all been attended to.

I would strongly urge the council to purchase a lot now when there is no excitement about smallpox, for the purpose of erecting a hospital thereon, and be ready in case of an outbreak.

All of which is respectfully submitted.

G. P. SYLVESTER, M.D.,
Medical Health Officer.

HARRISTON.

Secretary's Report.

He replies to a circular issued by the Provincial Board of Health some months ago regarding the prevalence of diphtheria in many parts of the province, instead of making his annual report of the proceedings of his board.

KINCARDINE.

Medical Health Officer's Report.

There have been no cases of contagious diseases during the year The general health is good.

LINDSAY.

Medical Health Officer's Report.

In accordance with the requirements of the Public Health Act of 1884, section 24, I beg herewith to submit my second annual report on the sanitary condition of the town of Lindsay, and such other matters as I think interesting and important in regard to public health and public requirements in this direction.

I am pleased to report that during the year a number of questions affecting the health of this municipality have engaged the attention of your Board, and in every instance a live interest has been evinced. I have only to regret that The Public Health Acts do not provide that independence of action necessary to carry out your wishes. Your Board, in one particular at least—the outlay of public money is simply recommendatory to the municipal authorities and depends entirely on their good will for this *pabulum vitæ*—is handicapped, and until some change is made by Provincial enactment your Board, in common with others throughout the country, must remain at a serious disadvantage. Fully realizing this as your representative at the inaugural meeting of the Provincial Executive Association of Health Officers, I proposed as first question for consideration such reconstruction and emendation as would make your duties more certain, powers more decided, the control of necessary funds within your authority, and as a consequence the securing to the public the full benefit of such measures as, in your judgment, were needed for the public good. It cannot be expected that municipal corporations, no matter how well intent, should give that careful consideration to sanitary matters as Boards of Health appointed for that purpose, therefore will not in all cases sympathize fully in your views—certainly not when such kindliness of feeling shall mean an outlay of municipal funds. The local Boards of Health should be entirely independent, quite as much so in every particular as boards of education. If made elective by the popular vote and directly responsible to the people, any danger of undue extravagance would be obviated, a great saving of human life and lessening of suffering secured, fully warranting any necessary outlay and securing a very fair return for the money invested.

This will be the more plain to you by referring to the British Registrar-General's report. During ten years covered by that report 2,777,584 years of life has been given, and some 41,655,760 years of suffering prevented for the money expended in sanitary improvements in that country. In Birmingham, notwithstanding that the population has increased one-fifth, from 41 to 51 persons to the acre, the deaths have decreased from 8,534 in 1887 to 8,156 in 1885, showing an actual saving in three years of 17,715 lives, and a secured money value, according to the Registrar-General's estimate, of £2,816,685. Nearer home we find by the Registrar-General's report for Ontario a reduced rate of mortality, representing also a money value as a return for the cash invested for health purposes. I need not quote further to impress upon your Board and the municipal council as well, that your calls on the treasury is really money well spent, yielding a fair dividend in an improvement of public health and the relief of suffering.

Not only were you met at the outset with this discouragement, but you have learned in the discharge of your duties that the public had to be educated in the very rudiments of sanitary requirements: your every act met with opposition often in quarters least expected. Early in the season cases of suspicious sore throat made their appearance within the corporation. Your medical health officer reported danger of an epidemic of diphtheria, and recommended strict enforcement of those sections of The Public Health Act relating

to contagious and communicable diseases, the placarding of infected houses, strict isolation, fumigation, disinfection, and other precautionary and restrictive measures; 1,000 copies of the pamphlet "How to Prevent the Spread of Infectious and Contagious Diseases," issued by the Provincial Board were distributed, and notwithstanding your efforts to instruct, every conceivable evasion was resorted to deceive and mislead, until the disease had assumed such proportions that further concealment was impossible; the judicious distribution of a number of printed questions in the form of a circular hastened this *denouement*, and as a result we learned that there had actually been sixty-four cases distinctly diphtheritic with thirteen deaths, and in the majority of cases householders and physicians had been remiss in their duty of reporting to your medieal officer. Houses were not placarded, isolation not insisted upon, and disinfection altogether neglected or carelessly performed. By means of these circulars we learned as well, that cellar drains were not as a rule trapped, ventilating pipes a *rara avis*, dry-earth closets, rendered obligatory by state and municipal enactment, not generally in use, that unplacarded houses permitting free intercourse were in the majority of cases charged with having disseminated the contagion; that in no single instance did the disease appear *de novo* in dwellings properly drained, and in which the dry-earth was used. In every such case where it occurred personal communication was attributed as cause, and in no dwelling sanitarily perfect, where ordinary precautions were observed, did the disease extend to a second member of the family. One apparent exception to this occurred, which is perhaps worthy of mention as teaching a salutary lesson In this dwelling every care it was supposed had been exercised both before and after the appearance of the disease, and a great deal of money expended to make it thoroughly healthy. An examination, however, revealed the fact than an untrapped drain connecting with the public sewer opened into the cellar, and its foul gases thus freely liberated spread throughout the house, favouring the communication of the disease to other members of the family. I am pleased to report that on the extent of this epidemic becoming known, and the requirements of The Public Health Act strictly enforced, *no new cases occurred* and the disease was quickly eradicated. The fact that the disease had already reached grave proportions and rapidly increasing in severity, to be immediately snuffed out, untold lives removed from jeopardy and deaths prevented, is proof indeed of the value of your services.

Your medical health officer believes that in Ontario, if not throughout the Dominion and Christendom, the rule holds good that drainage in cities and towns is very faulty, and as a consequence there is increased rate of mortality with density of population. There are few places more unfortunate in this respect than the town of Lindsay. We know the construction of our main sewer to have been defective from the first; that it is of no practical use for drainage purposes; that as a matter of fact, from error of construction, the incline is from near the centre to opposite ends, with only possible outlet at one; that a certain amount of filth necessarily remains at the further extremity from the outlet, receiving constant additions to ferment, decompose, and give off its poisonous gases continually; that a large number of cellar connections are square wooden contrivances with no excuse for trapping, if such were indeed possible; that the only means of ventilating is through surface openings on the public thoroughfare and cellar openings, which syphon the air redolent of vile smells and disease-provoking germs into the houses: and this reprehensible state of affairs is allowed to continue, notwithstanding the fact that, as guardians of the public health, you have recommended corrective measures; that an efficient system of sewerage has been submitted by the secretary of the Provincial Board and endorsed by a distinguished engineer; and despite your reiteraed recommendations and protestations, I am afraid that the season for action has almost past, and that severe weather approaching will give excuse for further delay, leaving this pest hole to continue belching its noxious gases into our nostrils and lungs as we walk our principal street or enter the places of business on either side. To remedy this as far as practicable, your medical health officer had the sewer thoroughly fumigated with sulphurous acid gas, vaporising some 200 pounds of sulphur, and used as well a quantity of soluble phenyle and sulphate of iron largely diluted with water, this *modus operandi* to be repeated at such times as may be necessary until efficient sewerage ventilating shafts and stench traps are secured As the importance of this procedure has been questioned, I may tell

you that sewage is said to contain about 15 parts of organic matter to the 10,000, and that even in a quiescent state it evolves some 30 cubic inches of deleterious gas to the gallon; and this not the evolution of a day only, but of weeks and months, as decomposition continues and new matter is added to undergo like change.

Your medical health officer has recommended the use of intelligence cards by the school board, similar to those in use in the city of Hamilton, and introduced there on the recommendation of the medical men of that place. It is only by some such means we can hope to receive early notification of the presence of communicable and infectious disease, and reach that class who do not in supposed trivial cases employ a physician, and who, unfortunately, are often the first to be attacked. These cards would as well prove a check on householders and physicians, who, in some cases, are inclined to evade the law.

The question of the quality of water being used throughout the town for drinking purposes has been also discussed by you, as well as the best plan of uniform water supply; to do away with wells altogether, which, under most favorable conditions, are liable to contamination.

As to water supply, your committee appointed to enquire find, that in the western portion of the town there are a number of very good wells, the water pure and cold; the better water was taken, as a rule, from very deep wells. Your committee conversed with a number of householders, and learned that the water came into the wells the more freely and of better quality the deeper they had been made: in some cases it rushed in so rapidly and filled the well so quickly that the diggers could scarcely escape. On the strength of this evidence your committee were of the opinion that this section of the town was plentifully supplied with springs of very excellent water. To decide, however, on the quantity that could be secured, it would be necessary to bore to a greater depth than the deepest wells. They think such procedure warranted them to decide the question of quantity that could be depended upon. The ground in this locality is above the tallest chimney on Kent street, and if supply proved sufficient could very easily be conveyed to the town for drinking and fire purposes.

Your medical health officer regrets to inform you that in cellars throughout the town there appears to be a great number of open cisterns, mostly large wooden tanks. These are very objectionable, and their continued use should be depreciated by your board.

During the past few years our schools had received little attention by way of repair, and had reached a stage of dilapidation, neglect and filth, in a high degree detrimental to the health and comfort of the pupils. I am gratified to report that suggestions offered for their reconstruction and sanitary improvement have been acted upon, and that to-day they are in every way equal to those of any other town in the province, and deserving of extended support.

In a paper read at the East Victoria Teachers' Convention, your medical health officer advocated the appointment of a Provincial sanitary officer, "whose duty it would be "to enquire into existing greivences that interfere with the robust physical growth "of our scholars; to visit all sections and schools in which there may be complaint; "see that district inspectors and trustee boards are fully alive to hygienic and sanitary "requirements, and that they are practically carried out; that in fact nothing should be "wanting from lack of intelligence or remissness of duty to interfere or in any degree "retard true symmetrical development." Certainly, an improvement on our present system should be inaugurated. Whatever may be the duties of school inspectors, boards of education or teachers, as laid down by official regulations, the result shows unwarranted and inexcusable neglect. I do not think that our local officials have been in any degree more culpably remiss than their confreres throughout the Province, but I do contend that the neglected state into which the schools of this town had been reduced, the dilapated appearance of schools, outbuildings and grounds, as they exist throughout country districts at the present, satisfies me that the machinery is defective. Either stated fees should be allowed present officers to stimulate their zeal, or some such official as I propose appointed to authoratively persuade them. We cannot expect a healthy man and womanhood and grossly outrage the laws of health during the tender and susceptible years of life. When we consider the many hours of confinement to which scholars are subjected, too often in close, foul smelling, ill lighted, poorly ventilated, dusty, dirty rooms, we realize the importance of

a radical change. No matter how high vaunted or popular such a system of education may be, I consider it a veritable fraud if sanitary laws are not practically incorporated. The school-house should be a home, its surroundings cheerful, clean, tidy; and a sound, useful education given to every child at the public expense. The result of teachers' conventions and the councils of inspectors who would appear the chief parties consulted, has been to elaborate and extend out of all reasonable proportions and requirements; and while it encourages a mental "cram," neglects the just equipoise of mental and physical growth. Physicians experience the results of this one-sided training in the ill-nourished, nervous, sickly and complaining children whom they are constantly called upon to attend. Is it not quite time that a halt was made and a more rational system introduced? The Kindergarten is a step in the right direction; instruction in useful trades and occupations should follow, as well as distinctly female schools, encouraging correct deportment, calisthenic exercises, and branches useful in the household duties of after life. Physical and mental growth should go hand-in-hand assisting, and not conflicting and overpowering each other; they should develop simultaneously, and any system of education not based on this principle is a failure.

In closing this report, I would mention that during the year I have had the cheerful assistance of your sanitary officer, and much of the work accomplished is due to his commendable attention to orders. I have also to express my gratitude for the kind manner in which your Board has received such suggestions as I have felt called upon to submit, and hope that another year will find, as accomplished facts, the changes and measures now recommended by you, when I am confident the public health will be the better protected, and increased immunity from disease and decreased death-rate secured.

P. PALMER BURROWS,
Medical Health Officer.

NAPANEE.

Medical Health Officer's Report.

In the month of August last we were visited by diphtheria in a very malignant form in the person of a young man named Hambly, and the remaining six children of the family received the infection. Five out of the seven died. The disease was strictly confined to the one house, which was isolated and afterwards thoroughly disinfected and fumigated. The cause cannot be definitely discovered, although there are surmises that the well water may have been polluted by sewage, the house being built on sandy soil and favoring this probability. And again, the too close proximity of the graveyard to the Hambly residence may have had something to do with it. We closed a cheese factory that was receiving milk from the Hambly farm. No further cases occurred, and the Board deserves the thanks of the people for preventing the spread of this disease. Nuisances have been attended to promptly when complained of. The cheese factory above alluded to having only been closed for a time and ordered to clean up, is again running, and requires the attention of the Board, which I have no doubt it will receive.

NIAGARA FALLS.

Secretary's Report.

Only two cases of scarlet fever, two of typhoid, and one of whooping-cough of an infectious nature, have occurred during the year. Slaughter-houses in the municipality are prohibited by by-law. The sanitary inspector, under instructions from the Board, exercises a strict guard over causes which, if neglected, might lead to unsanitary conditions. The town is in a good sanitary condition, and the law relating to public health will be enforced in order that this beneficial condition may remain.

ORILLIA.

Medical Health Officer's Report.

In compliance with the requirements of the Public Health Act, I beg to submit the following report of the sanitary condition of the Town of Orillia for the current year. It was a matter for congratulation that up to the end of the first half of the year the town was in a remarkably healthy condition, there being no epidemics or wide-spread cause of sickness or mortality. I regret, however, to have to report a much less favourable state of things in the last half of the year. In addition to the usual number of ordinary cases which we generally find prevalent during the summer and autumn months, such as diarrhœa, dysentery, cholera infantum, etc., we have had a number of cases of a more serious nature. In the month of August three cases of diphtheria occurred in a house on the corner of West and Coldwater streets, one of which proved fatal. On enquiry it was found that the disease had been propagated at Uxbridge, where the patient, a boy of seven years, had been visiting. The symptoms developed immediately on his return home, and the disease was communicated to the other children in the family before its true nature was discovered. The usual precautions were taken to prevent the spread of the disease, and I am happy to be able to say they were successful, no other cases having appeared in the town. I may remark that this is the first time diphtheria appeared in Orillia for several years past. This year, as last, there have been a number of cases of scarlet fever of a very mild type, occurring sporadically and showing no disposition to spread, in many instances not even among members of the same family. The cases, however, were sufficiently well marked in the characteristic symptoms to place the diagnoses beyond doubt. Whooping cough has been prevalent in the town during the autumn months. A large number of cases have been complicated with pneumonic fever. The outbreak so rapidly assumed a general epidemic form that any attempts at isolation were thought to be useless, and very few children in the town who were unprotected by a previous attack have escaped. The disease in uncomplicated cases cannot be said to be of a very serious type; indeed, in most instances, they show a disposition to yield more readily than general to treatment, and the attack is much shorter in duration than usual. Several deaths have occurred in very young subjects, but in every instance the disease was complicated with congestion of the lungs or convulsions. I regret to have to report a large number of cases of typhoid fever, occurring during the latter part of the summer and autumn. Last year we had eighteen cases and four deaths; this year we have had seventeen cases and one death. This is a record which, as citizens of Orillia, we ought to feel ashamed of, when we reflect that of all preventable diseases, perhaps none are more so than typhoid fever. Nearly all the cases appeared in the south and south eastern part of the town, and there can be but one opinion as to how they were propagated. In my report both last year and the year before, I pointed out the unhealthy condition of that part of the town, and ventured to predict that fevers would be an annual occurrence so long as the sanitary condition remained unimproved by more thorough and efficient drainage. In addition to the usual sources of fever in the district I have mentioned, the unsanitary conditions have been very greatly augmented this year by what is known as the West street drain. This drain, which had been cut for about half a mile through the swamp, as far as the Midland Railway, had no outlet to Lake Couchiching in consequence of the railway company neglecting to construct a culvert, consequently it was filled during the whole summer with stagnant water covered with a green scum, and emitting foul and noxious odours. It is not surprising that a number of the cases of typhoid were in close proximity to the drain. I am happy to be able to report, however, that both the Grand Trunk and Northern Railway Companies have quite recently had excellent culverts constructed through their respective roads,—culverts of sufficient capacity to allow a rapid passage for all the water likely to accumulate in the drain, even in flood time. This fruitful source of disease has therefore been removed. The inspector reported to me, during the summer, a large number of wells in a dirty condition, samples of water from a number of which he brought to me for examination. The usual test showed a large quantity of organic matter in each, and I gave orders to have them properly cleaned. I have to

remark, however, that no matter how thoroughly the cleaning may be, the improvement to the water supply is only very partial and temporary, as, owing either to the constant addition of surface water or the close proximity of the wells to cesspools and privy vaults, pollution is unavoidable. It affords me pleasure to be able to congratulate the Board on the fact of the council having at last elaborated a scheme by which a very large additional number of our inhabitants will be supplied with that blessing which many of us have been enjoying for some years past, viz.: a bountiful supply of the purest spring water. It seems almost needless for me to remark, at this time of day, that sanitarians, the whole medical profession, and every sensible thinking man in this enlightened age, are unanimous in the opinion that of all the conditions which conduce to the health of a community, none are more indispensable than a supply of pure water; and, on the contrary, of all the conditions which are conducive to the propagation of disease, none are more potent or fruitful than impure water. Therefore, no expense should be spared in supplying the whole community with so indispensable a requisite. I need scarcely say that the scheme shall have my hearty support, and I sincerely trust that nothing will prevent its being carried into effect as soon as the spring opens. The condition of the esplanade continues to be, as it has been during the past ten or twelve years, the cause of frequent complaints. The large quantity of decaying vegetable matter, together with numerous holes filled with stagnant water, are the source of foul and disgusting emanations, which, doubtless, largely contribute to the unhealthfulness of that part of the town. The railway company have been so frequently appealed to in vain in regard to this matter, that it seems useless to make any further attempts unless it might be in the direction of a lawsuit. I would suggest to the Board that the matter should, at as early a date as possible, be laid before the Provincial Board of Health, so as, if possible, to secure something being done in the direction of improvement as soon as the spring opens. I regret to have to report that much less sanitary work has been carried out throughout the town this year than either of the two previous years. This is owing to the dismissal of the sanitary inspector at the beginning of the year, and the adding of his duties to the already numerous duties of Mr. Sparling. It was quite impossible for that official, owing to the multiplicity of other engagements pressing upon him, to give the attention to sanitary inspection which the duties of that office demanded. The house to house inspection was therefore very partial and incomplete. Your chairman very wisely and properly engaged the services of Mr. Dreyer as assistant inspector for a couple of weeks in midsummer, but although he did an excellent work for that short period, it was altogether insufficient to meet the requirements of the town. I append hereto a synopsis of his report, from which it will be seen that the town is in anything but a good sanitary condition. I think it a great pity that the council thought it necessary in the interest of economy to dispense with the services of an inspector who could devote the whole of his time during at least three or four months of the summer to sanitary work. Without such an official the work of the Board must necessarily fall very far short of the requirements of the statute, and the public health must suffer in consequence. I beg to quote the following paragraph from the report of the Provincial Board of Health, which exactly hits the mark: "The appointment of sanitary inspectors can be considered only second in importance to medical health officers. It is quite obvious that no sanitary system, however well it may be planned, will be of practical service unless its provisions are carried out; and there must be some person to carry into execution the orders of the medical health officer and the provisions of the sanitary acts and by-laws. Such executive works it should be the duty of the sanitary inspector to perform, as well as to see what abuses or unsanitary conditions exist, and report them to the medical health officer when necessary. His work, to be effective, must be constant, unremitting and systematic. It is a work which, bringing him often into antagonism with individual ignorance, personal neglect and private interests, must of necessity, here and there, initiate and create a hostility towards him personally, as the officer is too frequently confounded with the office; hence—requiring tact, intelligence, and character, the work ought never to be delegated to any person not possessing these qualities, and any one possessing them deserves and will require to be properly paid." I had the privilege of attending the annual meeting of the American Health Association, held in the city of Toronto in October last, and I have to

thank the council for kindly re-embursing the expenses necessarily incurred. The meeting was a very important and interesting one, and very numerously attended by delegates and members from all the States in the American Union, and many of the towns and cities of this province, many of them being among the foremost sanitarians of the day. The various papers read were of a most interesting and instructive nature. The principal subject which engaged the attention of the convention was the disposal of sewage in cities, and the better methods for the removal as well as disposal of excreta and refuse in towns and villages. The unanimous opinion was in favour of crematories. Several of our own cities have already introduced them, and others are moving in that direction. It may be premature to speak of a crematory in Orillia at the present time, but certainly the time has arrived for introducing some better system, for portions of the town at least, than that which at present prevails, viz., the cesspool and privy pit. I have in former reports urged upon the council the necessity for the passage of a by-law abolishing privy pits on the main street at least, and the introduction of dry earth closets instead, but so far my efforts have been unavailing. I am fully convinced that if the importance of the matter was better understood and more fully realized by those in whose power the matter lies, we should very soon have a change. I desire, in conclusion, to point out one provision of the statute which could very easily be, but never has been, complied with. It is contained in Section 49 of the Public Health Act, 1884. Allow me to quote it verbatim: "Whenever any physician knows that any person whom he is called upon to visit is infected with smallpox, scarlet fever, dyhptheria, typhoid fever, or cholera, such physician shall, within twenty-four hours, give notice thereof to the Local Board of Health, or medical health officer, of the municipality in which such diseased person is, and in such manner as is directed by rules 2 and 3 of section 17 of schedule A." Blank forms have been provided in accordance with said rules, but they have never been used. The want of such reports has entailed a considerable additional trouble upon me in framing my annual reports. Synopsis of assistant inspector's report: No. of houses visited, 321; No. of houses re-visited, 22; No. of cellars found damp, 7; No. of cellars requiring cleaning, 11; No. of cellars requiring ventilation, 4; No. of cellars found containing rotten vegetables, 2; No. of dry earth closets, 3; No. of privies requiring cleaning, 23; No. of dwelling houses in unclean state, 4; No. of yards in an unclean state, 15; No. of manure heaps to be removed, 6; No. of unused cisterns under dwellings, 2; No. of pumps in yards not used, 6; No. of wells unused on account of polluted water, 10; complaints of tenants on account of bad well water, 4; samples of water tested and found bad, 6; No. of families using water from wells three feet deep, 12; No. of stables in a stinking condition on account of dead animals lying unburied, 2. This report was adopted at a special meeting of the council on Friday evening.

E. S. ELLIOTT, M.D.,
Medical Health Officer.

PARIS.

Medical Health Officer's Report.

I hope the time is not far distant when no new privy pits will be dug, and all the old ones replaced by a substantial ash closet. When this matter is well attended to, and the stagnant ponds done away with, the labours of the Board will be reduced to a minimum. The people want to show more interest than they have hitherto done in sanitary matters; but, notwithstanding their apathy in this respect, our town will compare favourably with other places in cleanliness and healthfulness. Very few cases of infectious disease have occurred during the year, and when people devote more attention to excreta removal, there will be still less.

W. BURT,
Medical Health Officer.

PETERBOROUGH.

Medical Health Officer's Report.

In presenting the third annual report of the Medical Health Officer, I would congratulate you on the freedom of the town during the past year from epidemic disease, on the low death-rate we have experienced, and on the increasing compliance on the part of the public with the provisions of the Health Act. While we have not been free from diseases which are due to removable causes, I believe their extent and severity have been as moderate as any town in the province, and have been considerably limited by the sanitary precautions that have been used. I will refer as briefly as possible to the various points that demand our attention.

Slaughter Houses.—These have been inspected at frequent intervals and found generally satifactory. Complaints have been made several times about one or two, and on investigation have been found not altogether without cause. I am glad to say, however, that the owners have promised to remove them before next spring.

Hog Pens.—There has been a large decrease in the number of these since the Board commenced operations. But every year a few have been found hidden away here and there within the proscribed distance from the dwellings, in some cases giving rise to considerable trouble. If there were better and more economical ways of getting rid of kitchen refuse, there would be less temptation to keep hogs.

Removal of Garbage.—This has been more systematically attended to this year, several persons finding employment in the work. The greatest difficulty is where vegetable matter, in a state of decay, is allowed to collect. Indeed, in some places, it would require the constant presence of a sanitary inspector to keep things in order. The advantage of a public scavenger paying regular visits is apparent. In such a case refuse would be gathered up and exposed, instead of being spread out or concealed.

Disposal of Excreta.—Earth closets are gradually being substituted instead of privy vaults, and will continue to increase in number as their sanitary value is recognized. The majority of vault closets are cleaned out once a year according to law. Some are emptied several times a season, the excreta being used for fertilizing purposes principally.. The old prejudice againt this is wearing away. It will be necessary next spring to provide a nuisance ground, as the old one has not been available of late.

Wells.—I have examined many samples of well water this season, and am glad to say that there is a marked decrease in the amount of organic matter present. This is no doubt due to the greater cleanliness above ground, filth and rubbish being removed before the surface becomes saturated. Another cause in some cases is the yearly cleansing which the law requires. But I am of opinion that many wells are used from year to year without annual purification, or the work is done in a perfunctory manner to evade inspection. Where wells have been found highly impure they have been closed up.

Complaints.—A large number of complaints have been made during the past year. To many the duties of a health officer appears to be of the most comprehensive kind. The blowing of steam whistles or the too early crowing of fowl, are supposed to be proper questions for the investigation of the Board. Many are neighbours' quarrels, and many are just and proper complaints. Your officers have investigated and rectified these in the simplest and quietest manner possible. All that has generally been found necessary is to state the law clearly to the offending party, and there is usually very little further trouble.

Sewerage.—Most of the complaints in the centre of the town have arisen from causes which a good system of sewerage would remove. Having referred to this before, I need but say that the extension of the water-works system not only creates, by the freer use of water, a necessity for better drainage, but provides facilities for it as well. Some of the drains have required frequent charges of disinfectants to keep them in good order.

Contagious Diseases.—The principal matter to note under this head during the past year is the prevalence of diphtheria. Peterborough has not been alone in this respect, almost the whole province having suffered. A circular relating to the number of cases, their causes, their courses, best means of prevention, etc., was filled out at the request of

the Provincial Board, and with others formed the basis of a paper read by the Secretary of the Provincial Board at the meeting of the American Public Health Association in Toronto, last October, which, I regret, I was not able to attend. The number of cases in town throughout the year, as nearly as can be ascertained, is about seventy-five, twenty-two houses having been placarded. Among these there were only eight deaths, all of them being children. I believe bad water and bad drainage to be the principal causes. In a thinly settled town, where the lots are large and admit of a good distance between well and privy vault there may be no danger; but as the town fills up and the lots become smaller and houses more crowded, and in consequence the well and closet are apt to be in dangerous proximity, there is great danger. Unless earth closets are generally used this will be attended with considerable risk, and to avoid it I should strongly recommend boiling or filtering all water for drinking purposes. An instance may be given of the perils of impure water. Diphtheria broke out in a family. Everything appeared to be in good order and no cause could be at first assigned. On closer examination it was found that the kitchen slop-pipe connecting with the waste pipe from the well had rusted through, thereby allowing the contents of the former to trickle down alongside of the pump. As it was impossible to determine the amount of contamination the well had to be closed. All cases cannot be traced so exactly as this. The most rigorous examination in some houses where the disease had occurred failed to detect any source of danger. But there must have been a sanitary leak somewhere, and this shows how careful families with young children should be during the prevalence of diphtheria. Wherever cases have appeared rigid isolation has been resolved upon, the other children kept from school, and when the disease has subsided the house and clothes have been disinfected with sulphur, chloride of lime or carbolic acid, under the direction of the medical attendant or the officers of the Board. Cases this year have been pretty faithfully reported. I am glad to say that at present the disease appears to be dying out.

Typhoid Fever.—There have been fewer cases of this disease during the past year than for some years previous. Sanitary measures are evidently beginning to have their effect. Two deaths have occurred from typhoid and one from typho-malarial fever.

Scarlet Fever.—There have been a few cases, but fortunately no deaths.

Mortuary Statistics.—In 1885 the Dominion Government included Peterborough among the towns in which mortuary statistics are collected. We thus know the exact death rate of the town, which was 18.46 per thousand last year. When we consider that 17 per thousand was fixed upon by the Registrar-General of England as a standard to be aimed at by sanitarians, we may congratulate ourselves on exceeding it so little. During the same year the ratio in the city of Toronto was 20.61 per thousand.

A Benefit.—On the whole, I think we can look back on the two or three years since Boards of Health were inaugurated with considerable satisfaction. To be sure, we have had no large municipal measures put in operation, but there has been a vast deal of individual work, and without this all municipal measures would be useless. It has been said that few places will pay any attention to health considerations until the fear of death is staring them in the face. I am glad to be able to say that this state of affairs is rapidly passing away in Peterborough. The public sensibilities have been sharpened, and as this process goes on a firmer demand will arise for those more important measures of sanitary reform which will prove an inestimable boon to the town, and assist in no small degree the operations of the Board.

J. CLARKE, M.D.,
Medical Health Officer.

PICTON.

Medical Health Officer's Report.

Although the death-rate in our town (17.3) has been very small during the past year, yet the amount of sickness prevailing has been far too large in a place which, with little effort, could be made one of the healthiest spots in Canada. The marsh at the head of the bay, together with other stagnant water patches, is the cause of nearly all the

trouble in the matter of diphtheria, typhoid and other preventable diseases. Diphtheria was in five houses during the year, resulting in six cases and two deaths. Four of the houses were quarantined and thoroughly disinfected; and in stringently carrying out isolation, etc., we had the satisfaction of stamping out the disease. Prompt action has been taken in the few cases of nuisances complained of. Considering that sanitary work is in its infancy in Picton, we have good reason to congratulate ourselves on its progress, and I have no doubt but that in a short time we will be in a position to state that we have surmounted all difficulties in the way of carrying to a successful issue every needed sanitary reform at present contemplated.

Port Arthur.

Medical Health Officer's Report.

Some of the water used by the inhabitants has been proved by analysis to contain matter injurious to the health of the public. This water is that taken from the creek. The water ought to be entirely taken from the bay, as it has been proved to be comparatively pure. This drinking of bad water is the cause of many of the zymotic diseases which have been reported during the year. Negotiations are being made to have a system of drainage adopted for the town which, if properly carried out under the auspices of the Board, will have great influence for good in public health matters. The slaughter-houses have been kept in a sanitary condition, and the streets, lanes, and yards have been kept clean. During the year we have had forty-six cases of diphtheria and seven deaths; four cases of scarlet fever, none of them being fatal, and ten cases of measles. These diseases are attributed to the large amount of rainfall which was allowed to lay in flat places on the ground and become stagnant through inefficient drainage.

Sarnia.

Secretary's Report.

The diseases prevailing here during the past year were typhoid, diphtheria, measles and whooping-cough, none of them being serious, so that the health of the town is in a comparatively good condition. All unsanitary conditions were closely looked after and remedied. The water has been considerably improved by extending the suction pipe further into the river, and drainage has been improved by a main sewer which is in process of construction.

Seaforth.

Chairman's Report.

We have had a few cases of diphtheria and scarlet fever early in the year, but they were not allowed to become epidemic, precautionary and successful measures having been adopted early for the prevention of their spread. Five cases of typhoid fever occurred early in the spring, the attack being due to exposure in other places either to the disease itself or to the unsanitary conditions which are the causes of such disease. No deaths. I am confident that the early and efficient attention paid to sanitary matters in the beginning of the year by the Board has been the means of keeping our town comparatively free from infectious or contagious diseases. I believe the sanitary inspector did his work well, and am glad to note that a large number of the people cheerfully complied with his instructions and obeyed the law. It is only through careful and thorough inspection of everything which might tend to an unsanitary condition being made that we can hope to become impregnable, as it were, against the inroad of disease. We want to keep up, and, if possible, increase the reputation Seaforth now has of being one of the most healthy towns in Ontario.

STRATHROY.

Medical Health Officer's Report.

In compliance with the provisions of the Public Health Act, I present my report on the sanitary condition of the town. It is gratifying to be able to state that this place has been in a fairly healthy condition during the year. There is an improvement on the previous years, particularly as regards typhoid and malarial fevers, very few cases having occurred, and those were of a comparatively mild type. Of late there has been some scattering cases of measles, light in character, and uniformly resulting in recovery. So far as I know, no cases of scarlet fever have been reported. There was only one death from diphtheria, that disease not having prevailed to any extent, every precaution being used to prevent its spreading. The town during the months of April and May underwent a thorough cleansing. A from house-to-house inspection was made (some four or five hundred in all) by the sanitary inspector, who, being a man of determination of character, performed his duties, uninviting and disagreeable enough though they were at times, to the satisfaction of the public generally. The arrangements made by the Board of Health were of such a systematic nature that the whole work was completed early in May. Although the best possible plan for the disposal of the night soil was adopted, still some complaints were made by those in the vicinity of where it was deposited. It would be well in the near future to take into consideration the matter of the disposal of the refuse and garbage of the town, as the by-law is very strict in regard to such deposits being made where it would endanger the public health. It is unnecessary to take up space to point out the various ways in which such deposits may cause sickness and disease.

The plan adopted in many of the large towns and cities in this country at present, is to have a furnace in which to consume the organic substances. The cost to meet the requirements of a town of this size would not be very great in comparison with the benefits derived from the destruction of matter which, when left to decompose, would be so prejudical to the public health. There ought, at least, to be a piece of ground purchased or rented for the purpose sufficiently removed from any dwelling, so as not to be considered a nuisance. The water in the wells of some of the principal hotels was tested, and those considered impure were ordered to be cleansed. It would be advisable for the Board to consider whether those who sell milk and keep it for general use supply their cows with good water, as the stream running through the place cannot be of very pure quality from the various contents that are thrown into it at all seasons of the year. Some complaints have been made against the slaughter houses, that matter will demand attention to ascertain if they are kept and situated in accordance with the Health Act. The Board of Health have, during the past year, done what they reasonably could to improve the sanitary condition of the town, endeavouring to place it on as healthy a basis as any town or city in the country.

G. M. HENDERSON,
Medical Health Officer.

TRENTON.

Medical Health Officer's Report.

In presenting my third annual report I regret that I am unable to give definite information respecting the number of cases of contagious diseases that have occurred within the municipality since last report. None of the local medical men having notified this office of the existence of any case, save that of one family afflicted with typhoid fever.

In the early part of the summer an epidemic of measles, chiefly, if not wholly, confined to the east side of the river, visited us. The first case was a direct importation from a neighbouring city, the children of a visitor having developed measles on the second or third day after arriving. The family of the nearest neighbour and playmates of the visitors contracted the disease from them and it soon became general in east Trenton.

A little earlier in the season scarlatina was prevalent in the neighbouring villages and county, but I am not aware that any cases occurred in the town.

The good effect of the improved drainage of the flats is observable in the absence of malarial disease during the year, and should stimulate the committee to greater efforts in the same direction.

The cases of typhoid fever have this year been all confined to the higher portions of the town, and are in most cases traceable to drinking of impure well water. With the exception of one case, the water from the wells exhibited on examination the presence of organic matter and chlorides.

As was mentioned in my first report, the soil on the hill is composed of loose drift gravel, and hence kitchen slops thrown on the surface, as well as the contents of privy vaults, readily percolate into the well through the ground. Each of the houses on both sides of the river, where the disease was found, was placed in the most favourable position, viz., on the brow of the terrace, the yard containing the well lying between the house and the stable and closet. There was thus, looking at the surface, a pretty steep incline favouring the spontaneous removal of dangerous liquids. The porous soil, however, absorbed them before they had got beyond the well, and thus contaminated the drinking water. In one case the cistern had no outlet pipe, and its overflow remaining in the cellar became a source of danger.

The lower portion of the town, being supplied with water in pipes from a source not yet contaminated with sewage, is not so likely to suffer from the inroads of disease from this cause; but the evil of allowing excreta to be deposited in shallow privy vaults, and incorporated with every foot of soil, must soon render dwelling in the flats dangerous. The employment of dry earth closets in these situations should be made compulsory as a remedy for the threatened evil.

On October 8th, a child living on the west end of Dundas street, and in the same house with others suffering from *Impetigo Contagiosa*, a contagious affection of the skin known by the appearance of the vesicles which afterwards dry into peculiar crusts, and which had been prevalent in the neighbourhood for some time and popularly denominated "chicken-pox," was found to have this eruption as well as a rash universally spread over the face, chin and chest which, by the morning of the 10th, had spread to the extremities, those on the face becoming pustular and emitting the peculiar odor of small-pox, the patient suffering from high fever and restlessness. On consultation with Dr. Day the case was diagnosed as one of severe small-pox, and the Board was advised to isolate the child and all the inmates of the House. They were removed on the same day to Baker Island Hospital where, on the following day, they were joined by Dr. H. H. Hawley, who had already done service in the epidemic at Hungerford as medical officer. A synopsis of his report is as follows:—

"I first saw the case on October 11th. It was that of a child fifteen months old. The face was well advanced in the stage of ulceration. The eruption was not so far advanced on the rest of the body. The patient was very weak, with feeble pulse, poor appetite, and other symptoms of prostration. On the 12th, a vesicle had formed on the cornea and pupil of left eye. On 14th, eruption advancing to stage of incrustation over the trunk and extremities. On 15th, the patient begins slowly to improve, the left eye still a bad feature. The case progressed favourably from this time forward. On the 27th, the quarantined family, other than that of the child, left the island after thorough disinfection and change of clothing. The house in town had in the meantime also been disinfected. The child left hospital two weeks after this date perfectly recovered, with the exception of marked opacity of the cornea of the left eye. About the source of the contagion I could obtain no information, and the parents were as much in the dark as myself."

Health Inspector Hynde reports that during the year a marked diminution in the number of pigs kept in town has taken place, as a consequence of the enforcement of the regulation as to the distance from dwellings.

The following nuisances were removed or abated, viz. :—

Pig-styes too near dwellings	15
Unclean privies	35
Unclean yards	10
Accumulations of manure	10
Polluting of streams	3
Depositing night-soil on streets	5

All of which is respectfully submitted,

CHARLES McLELLAN,
Medical Health Officer.

WALKERTON.

Medical Health Officer's Report.

The absence from any contagion, and there being no necessity for any executive action, makes it unnecessary to say anything about the sanitary condition of the municipality, which is very good.

WOODSTOCK.

Medical Health Officer's Report.

The following is the report of Dr. Ross, Medical Health Office, for Woodstock, to the Provincial Board of Health :—

Shorty after my appointment I, with the aid of other citizens, organized and brought about the holding of the Woodstock Sanitary Convention on March 30th and 31st. Besides being heartily supported by local influential men, we had with us such eminent sanitarians as Profs. Lyster and Clarke, of Detroit; Drs. Bryce and Oldright, Toronto; Arnott, London; Griffin, Brantford, and others. Although the convention was not so largely attended as expected and as it should have been, still the effects of it were seen this season, as a general cleaning-up all round was noticed. Over two-thirds of the wells in town have been cleaned out and the covers made secure against the entrance of toads, etc. Two men have been kept almost constantly employed cleaning out and filling up the old privies, after which the dry earth system was introduced. A large number of very bad privies still exist, and a by-law should be passed ordering them all to be cleaned out and filled up without delay, after which the dry earth system could be introduced. A large number of the proprietors of houses erected this year have adopted the dry earth system. After an examination of the high and common schools they were found in a good sanitary condition. The inspector and myself visited the different dairies from which the milk supply of Woodstock is obtained, and found the stables clean and well ventilated, the water supply good, and the cows healthy. After an examination of the milk (which was of a very superior quality), I issued permits for its sale up to the 1st of January, 1887. I cannot too strongly urge the speedy introduction of a supply of pure water for domestic purposes, such being an actual necessity for our town. In my opinion many, if not all, of the cases of fever we have had in the town this season can be traced to the use of polluted well water. Such a supply of water can be easily obtained and would be a paying investment for the town, both in a financial and sanitary point of view.

VILLAGES.

ALVINSTON.

Secretary's Report.

The workings of the Board in the interests of public health have been satisfactory, and the people are at all times willing to co-operate with the Board. A species of sore throat

was epidemic, but as it was not considered to be true diphtheria, the people were left to follow the advice of the attending physician. Otherwise the municipality has enjoyed the usual state of good health. Our drainage is defective, but we hope in the near future to have this remedied.

ARKONA.

Chairman's Report.

Early in the season the Board had posters distributed calling on the people to put their premises in a sanitary condition. The inspector subsequently visited all premises and found that the inhabitants had obeyed the instructions sent them, and that the village was in an excellent state of health and cleanliness. The medical Health officer verbally reported to the Board at its last meeting, that the health of the village was so good as to render a written report from him unnecessary.

AYR.

Medical Health Officer's Report.

A very careful inspection of all premises has been made, and, with some sanitary changes effected, the village is in a good sanitary condition. No outbreak of any contagious disease took place. Owing to the satisfactory state of sanitary matters generally no medical health officer was appointed.

BATH.

Medical Health Officer's Report.

In July last a case of diphtheria made its appearance, and was rapidly followed by several more of a malignant type. The members of seven families were affected, and the fatality was very great, especially amongst the young. A few adults took the disease but recovered. As soon as it made its appearance the Board instituted the most stringent remedies for checking its spread, isolation of the affected being rigidly enforced, and all made to put their premises in proper sanitary order. We had a temporary hospital erected for the reception and isolation of those becoming affected, but it was not needed to bring it into requisition, the means used having the effect of stamping out the disease. The only cause I know of is, that where the disease occurred the drainage was bad. There were twenty-seven cases and eleven deaths. This experience points strongly to the necessity of being thoroughly vigilant in looking after the sanitary conditions of our village.

BELLE RIVER.

Secretary's Report.

At the beginning of the year we were free from contagious disease. On the 11th of August, however, it was reported that there was a case of diphtheria in the village, when the Board took immediate steps for the isolation of the case and other precautions deemed necessary to prevent the disease spreading. After a short time the medical health officer reported the case recovered and the house thoroughly disinfected. No more cases occurred. This being the only case of dangerous disease in our village during the year, I think I am justified in stating that our sanitary condition is excellent, and the Board is to be congratulated for having done its duty so thoroughly.

BOBCAYGEON.

Secretary's Report.

No disease of an infectious nature visited us during the year. It was therefore unnecessary to appoint a medical health officer; but the Board stands ready for any emergency. No nuisances in existence with us.

BOLTON.

Medical Health Officer's Report.

I have the honour to state that, with the exception of a few cases of measles, the village of Bolton has been free from infectious diseases during the past year. The sanitary condition of the village is, at present, very good.

BOTHWELL.

Secretary's Report.

The Local Board has not experienced the least trouble in carrying out the provisions of the Public Health Act, as the residents have at all times shown a cordial disposition to carry out whatever orders and suggestions which the Board was called upon to make. The sanitary condition of the town and the health of the people are in a very satisfactory condition. We have had six cases of diphtheria this term, but the disease was brought here by a member of the family who contracted it elsewhere. Before being fully cognizant of the character of the disease, it had communicated itself to another family, but did not get leave to go any further. Dr. Wilson had charge of the cases and easily succeeded in stamping them out.

CARDWELL.

Medical Health Officer's Report.

The village has been in a very healthy condition during the year, epidemic, contagious and malarial diseases having been conspicuous by their absence. There are some unsanitary spots in the shape of pig styes, etc., which have been tolerated. The surroundings of some of the manufacturing establishments are in an unsanitary condition, but as they are considerably away from the thickly populated part of the village, the Board deemed it wise not to interfere.

CHESLEY.

Sanitary Inspector's Report.

Our village has been kept in a good sanitary condition, and there has been no infectious or contagious diseases present.

CLINTON.

Chairman's Report.

The Board found it only necessary to have two meetings. In inspecting the village, a few unsanitary conditions were discovered, and notices to the number of 100 were

posted, calling on the citizens to "clean up." Dr. Worthington is the Medical Health Officer, but he has not yet sent in his report. We have not had any disease of a contagious or infectious nature, and the village is in a good sanitary condition.

DRESDEN.

Secretary's Report.

Owing to the late fire having extended to the municipal buildings, consuming books and all records, I regret that I cannot give you an extended report of this Board. We have had two or three cases of diphtheria and a few of typhoid—one death. The village is in a very healthy condition at present writing.

EMBRO.

Secretary's Report.

The sanitation of the village is carefully looked after by the Board. There were four cases of scarlet fever, fifty to one hundred whooping cough.

EXETER.

Chairman's Report.

The village was thoroughly inspected, and all unsanitary matters ordered to be put right, which was done in due time. The owner of a cattle stable was ordered to put it in a proper sanitary condition. There have been a few cases of typhoid, whooping cough and one case of scarlatina. In all cases the requirements of the law were observed, and the diseases were all confined to their original places of outbreak.

HASTINGS.

Secretary's Report.

The sanitary inspector reports that he made seventeen official visits during the past year, and that drainage, cellars, privies, etc., are in a good sanitary condition, and the village healthy. The medical health officer has no reports to make, as there were no diseases dangerous to the public health in existence.

HUNTSVILLE.

Medical Health Officer's Report.

A mild type of measles has prevailed without any fatal results. The popular sentiment prevailing here is against isolation, although in every instance this method of precaution is urgently insisted on by me, but not always successful. No other infectious disease has occurred during the year. In view of the fact that a large number of the people require vaccination, I would recommend the Board to put the vaccination law in force. The slaughter house is not in a sanitary condition. The examination and ordering of privies, etc., to be disinfected, had a salutary effect.

KINGSVILLE.

Medical Health Officer's Report.

There were fifteen cases of diphtheria and three deaths during the year. Every possible means were taken for the prevention of its spread. The houses were placarded, disinfected and isolated, all unnecessary intercourse between the inmates being forbidden. The means taken had the effect of confining the disease to the narrowest limits possible. The complaints of unsanitary conditions have been very few. The sanitary needs of the schools have received some attention. Although we have a right to be thankful for the healthy condition of the people, we should not rest contented until the sanitary conditions are such that contagious diseases will have no foothold.

MILVERTON.

Medical Health Officer's Report.

The health of the village is excellent. There have been only three cases of typhoid, one of scarlet fever—one death. I would advise, however, that the law relating to the public health should be far more stringently enforced than it has been.

MORRISBURG.

Secretary's Report.

We have a meeting of the Board when there is any occasion. We have a medical health officer (without salary), and two salaried inspectors. The village has been very free from disease during the year, none contagious occurring.

NEW HAMBURG.

Medical Health Officer's Report.

In accordance with the demands of the Health Act I present my report of sanitary action for the year 1886. In doing so it may be summarised by saying that, what we have done during this year has, in a great extent, been a continuation of the work begun in 1884 and 1885. In so far that the Board has had careful supervision of all nuisances brought to our knowledge, directly and indirectly; outbuildings have been carefully inspected, and when necessary, improved or removed, as well as keeping our water supply for drinking and household purposes properly inspected and tested. The water of many wells was tested, and although an improvement on former years has been found, still much care in future will be needed to control one important factor in the production of disease. Our village has, on the whole, been remarkably free from serious endemic diseases. A few cases of measles, scarlatina, and whooping cough have been reported, but of a mild type. There have been no cases of diphtheria as far as known. A form of "prairie itch" has been reported in our school, but means have been taken to prevent its spread. On the whole, our village has this year been as free from disease as in any former year, and no doubt much of this is due to decided action by the Board on all occasions. The death rate also has been very low as a natural result. A form of malaria fever has been reported, but no bad results to the community are anticipated.

NIAGARA FALLS SOUTH.

Medical Health Officer's Report.

The only contagious diseases we had for the past year were ten cases of diphtheria, one proving fatal. Otherwise the village was in a healthy condition. The sanitary

inspector reports that pig-pens are giving great annoyance, and says that the law ought to be as stringent in dealing with them as it is with slaughter-houses, none of which we now have.

PORT COLBORNE.

Secretary's Report.

Not a single case of dangerous disease has occurred during the year. Thorough inspection of all premises have been made and found to be in a clean condition. A constant superintendence is exercised over all backyards, etc., etc., the unsanitary condition of which might cause serious disease. Our village is one of the healthiest in the Dominion.

POINT EDWARD.

Secretary's Report.

The health of this village for the past year has been very satisfactory, there being no disease of an infectious nature reported. The Board had nothing to do in consequence.

PRESTON.

Secretary's Report.

Notices to the people to put their respective places in sanitary order were issued in the spring, and subsequently on the inspector's visits it was ascertained that these notices were complied with in almost all cases. The village is now in an excellent sanitary condition. No contagious disease of any kind.

STREETSVILLE.

Secretary's Report.

The village has been well inspected by the sanitary inspector, and on his first round notified all persons to have their premises put in order according to law. It was subsequently ascertained that in nearly all cases the orders were executed. All wells were cleaned out by the 1st of July. The old burying ground in connection with the Presbyterian church is in a bad and overcrowded state. Attempts have been made towards the erection of a new cemetery, but so far the matter remains as it was. Cases of typhoid have occurred periodically in the vicinity of the cemetery, and to its unsanitary condition may be traced the disease. One case of diphtheria, seven of scarlet fever, and five of typhoid, one case proving fatal. Reporting diseases by medical men is very much neglected.

TEESWATER.

Medical Health Officer's Report.

With the exception of a few cases of diphtheria and typhoid of a mild type, there has been no contagious disease in our midst. The Local Board has used its energies in promoting cleanliness and a compliance of the Health Act. To the manner in which this is carried out by the Board and people, may be attributed the excellent sanitary condition of the village.

THEDFORD.

Secretary's Report.

Twenty-five cases of diphtheria, causes not known. Disinfection, isolation, etc., carried out, otherwise the village has been in a very healthy condition.

WALLACEBURG.

Medical Health Officer's Report.

In the early part of the year scarlet fever made its appearance and continued into the warm weather, notwithstanding that every precaution was taken to prevent its spread. There were thirty-four cases and only one death. In the latter part of February we were visited with a most virulent type of diphtheria. The house was promptly quarantined, but a few days later it was reported in a second house, which was also quarantined. On investigation I discovered that both these cases had their origin in a third case that occurred a week previous, and which came from Dover township. Owing to isolation, fumigation, etc., the disease did not spread beyond these three houses. If proper notice had been given and precautions taken by the physician attending the first case, I am strongly of opinion that it would not have spread any further. As a result of this negligence there were ten cases and six deaths. The schools on the south side of the river was closed. In August an additional case occurred and resulted fatally. I could not trace the cause of this last one. I know that whooping cough occurred numerously and that one death took place from it, but as there were no reports sent in I cannot speak definitely. I examined the water in several wells previously considered good, but I found the water to be bad in all of them. In view of this fact, I think the council should go about having a proper system of water works for the village without delay. The sanitary inspectors distributed circulars containing extracts from the Health Act relating to householders. Pretty general compliance was made by the citizens to the requirements of these circulars.

WATERDOWN.

Medical Health Officer's Report.

In January, February and March, we had a good many cases of whooping cough. A few cases of typhoid came under my notice in the fall, attributed to low and impure water. There have been six cases of diphtheria, but they were all of a mild type. This disease is becoming less prevalent every year; in former years it was very prevalent. I think this gratifying state of things is owing to the ever increasing interest taken in the sanitary affairs of our village. The sanitary conditions of the municipality have undergone a marked change of improvement since the Public Health law came into force. The outbuildings of private houses and of the public schools are now kept in good condition, being frequently and thoroughly disinfected and cleaned out. A sewer has been laid on Main street, which is and will be of great sanitary benefit. There have been very few complaints of nusiances and the health of the people is on the whole excellent.

WATERFORD.

Chairman's Report.

There have been no disease present in our village of a contagious nature, with the exception of whooping cough, but as that disorder was not reported by the doctors in

attendance, I cannot give you particulars of it. Early in the year the sanitary inspector made a general inspection, after which the Board acted on complaints from residents. There were several of these of an unsanitary nature, all of which were satisfactorily attended to. One particular slaughter house was ordered to quit.

WELLESLEY.

Medical Health Officers Report.

We regret that we are not in a position to congratulate ourselves on the general good health of the people as we did last year. Up to the month of September, however, we had reason to believe that everything was sound; but in that month our prospects of a whole year of immunity from disease were rudely shaken by the appearance of diphtheria, which spread so rapidly that in a very short space of time thirty families were involved, infecting a large number of children between four and eight years old, twenty per cent. of them succumbing to the disease. It spread rapidly until the people became able to realize their danger and the importance of isolation and other remedial measures. Some of the people had the misfortune to rely on a worse than worthless *nostrum* advertised and issued by a clergyman of the county, as a "sure cure for diphtheria!" By a diligent enforcement of sanitary laws, the closing of the schools and a solemn warning against "sure cures," we had the satisfaction of curtailing and eventually stopping the onward march of the malady. There were a few cases of typhoid, and a few days ago scarlet fever appeared in a family near Bamberg; it is of a mild type. The health of the people is good with these exceptions.

WELLANDPORT.

Medical Health Officer's Report.

The sanitary condition of the township has been remarkably good, and free from any epidemic of disease during the current year. Recently a few cases of scarlatina have occurred, but by proper precautions they can be confined to their original limit. The disease is of a mild type. No deaths.

WELLINGTON.

Medical Health Officer's Report.

No infectious or contagious diseases reported to me during the past year.

WIARTON.

Medical Health Officer's Report.

In June last a case of smallpox was imported here in the person of a sailor who was on board the *Athabasca*, and came here from Owen Sound sick. Four persons in the family, including first case, had the disease, but owing to the manner in which the cases were watched, isolated, and the house quarantined, the disease was strictly confined to the one house. There were two deaths, which were attributed to the fact that vaccination had not been previously performed. The two that recovered were successfully vaccinated. After this vaccinatien was generally performed on those in the village requiring it. In May and June we had a severe epidemic of measles, and a few mild cases of scarlet fever. In June a thorough inspection of the village was made, and all unsanitary conditions discovered were removed. We have at present a very clean and healthy village; and as a summer resort it is one of the best in Ontario. The Board of Health has done its duty, and the citizens have done theirs.

TOWNSHIPS.

Adelaide.

Secretary's Report.

The inhabitants generally are willing to co-operate with the Board in the carrying out of all regulations regarding the public health, and the result is that our township is free from all diseases of an infectious or contagious nature, and in a good sanitary condition.

Adolphustown.

Medical Health Officer's Report.

The health of the township is, so far as contagious diseases are concerned, and has been for the year, good. I have not been called on to discharge any duty in my official capacity during the year.

Albemarle.

Medical Health Officer's Report.

This township is so gifted by nature in its situation and its good natural drainage and water supply, as to make it almost perfect in its sanitary conditions. During the time that the smallpox was in our neighbouring village of Wiarton, in June last, vaccination in this township became pretty general, and with the view of encouraging it, this Board distributed vaccine points to the different school sections gratis. The Board at present is in a good working condition, and is using its best efforts in the cause of public health.

Aldborough.

Secretary's Report.

Diphtheria was allowed to prevail in the township owing to the neglect of the physicians attending not reporting cases, and failing to take the necessary precautious measures against its spread. Some members of the Board are anxious to have the law carried into effect, while others are just the opposite. While this unsatisfactory state of affairs last it is impossible for a Board of Health to be effective.

Alice.

Chairman's Report.

This township enjoyed the best of health until October, when diphtheria broke out, and in a short time nine families were affected. The disease was brought from the town of Pembroke, and was allowed to spread through the neglect of the physicians in charge not reporting the cases until members of the Board happened to find out that the disease was in existence. The Board at once sent Mr. Ryan to placard the houses, and disinfect them, etc. We have the satisfaction to know that by our humble endeavors the disease was crushed out; and the good sense of the people contributed to this satisfactory result. I believe that had we had timely warning the disease would have been prevented

spreading to any serious extent The council don't think it necessary to appoint a medical health officer, depending on local doctors to report disease. It is now known that this dependence is mi-placed, and that physicians do not comply with the law in this respect. The sanitary condition of our township is good, and but for these imported diseases and the neglect specified we would be free from disease of a serious nature.

ANCASTER.

Secretary's Report.

The Board has been engaged actively in prosecuting sanitary measures in the township, cleaning up slaughter-houses, bone-dust factory, etc. There are yet two slaughter-houses that require close watching. There have been seventy-five cases of diphtheria and five of typhoid, and the greatest care was taken to prevent the spread of the former. The water in some cases is bad, and privies are often found to be too close to wells. Disease has occured through this cause.

ARTHUR.

Secretary's Report.

After the Board was oppointed in the early part of the year the following resolution was passed by the council:—"Moved by Mr. Hamilton, seconded by Mr. Feehan: That the reeve be requested *not to call* the members of the Board of Health together unless absolutely necessary.—Carried." This of course quashed the Board, and therefore nothing has been done.

ASSIGINAC.

Inspector's Report.

I have made several inspections of the township and village during the year, and any unsanitary condition met with received prompt attention, with the exception of two or three accumulations of stagnant water, which the Indian Department will have to look after; and I am happy to say that I had the cordial support of the people themselves in remedying any sanitary evil pointed out to them. The village of Manitowaning is in a clean state with the exception of the schools, which are badly in need of improvement both in their interior and surroundings. It is hoped that the trustees will take action in this matter without being compelled to do so, and that the Indian Department will see to the nuisances above hinted at. No epidemic of infections or contagious disease during the year.

ATHOL.

Secretary's Report.

No unsanitary condition of any consequence has come under the notice of this Board. There have been six cases of Diphtheria and three deaths. They were all isolated and prevented spreading any further.

BARTON.

Secretary's Report.

I have carefully examined the fat-rendering and fertilizing works, etc., and although some of them were a little slow in carrying out the orders given them to clean up, yet, in the end, all of them complied. There has been great improvement in sanitary conditions here since the passing of the Public Health Act. We obtained two separate convictions from the magistrate against a party for depositing excreta in the township without exercising the proper precautions to prevent a nuisances, and since that time the law is being better respected. We have taken every means to enforce compliance under the Act with our regulations, and the result is that the people are rapidly becoming co operative in and appreciative of sanitary reforms. Quite a number of cases of Diphtheria have occurred during the year. I have made careful enquiries from the doctors in attendance as to the cause, but failed to elicit any definite opinion. Every precaution was taken to prevent its spread, and at present I do not know of a single case in the township.

BELMONT.

Secretary's Report.

We have had no infectious or contagious disease here during the year. No report from the Medical Health Officer, as he has left the place, and the Council has not yet appointed another.

BEVERLEY.

Secretary's Report.

The work done by the Board this year was very light. The members met two or three times, but beyond discussing some of the provisions of the Public Health Act, nothing was done. The only epidemic disease was Diphtheria, of which there were a few cases and three deaths; otherwise the general health of the township has been and is very good.

BIG LAKE.

Clerk's Report.

No regularly constituted Board. No Medical Health Officer. No action taken regarding the sanitary condition of the municipality. No infectious or contagious diseases. Members of the council think themselves a local board.

BISBROOK.

Secretary's Report.

As our Medical Health Officer, either through neglect or otherwise, has made no report to this Board for the past year, I cannot say anything further only that the health of the township is good. There was one case of Diphtheria and one of Typhoid, neither of which was reported.

BLENHEIM.

Chairman's Report.

Early in the year the township was divided into three for the purposes of inspection, a member of the Board taking charge of each. The reports brought in by the members speak highly of the good sanitary condition of their respective districts. Suggestions have been made as to the improvements in the conditions of slaughter-houses, piggeries and the refuse from a cider mill, all of which have been willingly carried out. No contagious or infectious disease for the year in the township. The Board is doing a good work, which meets with the cordial co-operation of the inhabitants.

BOSANQUET.

Secretary's Report.

No epidemic of disease this year. Vaccination has been very generally resorted to, no compulsion being necessary. The only slaughter-house here is kept in good order. Municipality in good sanitary condition.

BROCK.

Medical Health Officer's Report.

During the summer we were threatened with an outbreak of scarlet fever, but owing to the precautions taken it did not spread. There are a few cases of typhoid in the village of Sunderland, but the Board has adopted sanitary precautions which, I believe, will confine the disease to its present limits. There are houses in this village whose cellars and drainage have been bad, but a large sewer was constructed last summer which will to an almost certainty cure this evil. The Board has done a large amount of good in sanitary matters this year. I think that in some cases the wells are too near privies, and that the quality of the water is suspicious. These matters must be remedied, and delinquents given to understand that the instructions of the sanitary inspector must be carried out and the law obeyed. I have much pleasure in bearing testimony to the very efficient services rendered to the cause of sanitary progress in this municipality, both by the sanitary inspector and the secretary of the Board.

BROOK.

Medical Health Officer's Report.

I take pleasure in reporting that the sanitary condition of this township has been better this year than it has been for the past six. No epidemic of any kind has come under my observation.

BRANTFORD.

Medical Health Officer's Report.

I have much pleasure in submitting to you my annual report as Medical Health Officer for the township of Brantford for the year 1886.

There is much difficulty in giving an accurate report of the contagious diseases that have been most prevalent in the township, owing to the inaccuracy of our system of registering deaths and the causes. The township on the whole has been free from any epidemics during the past year.

Diphtheria has shown itself in a few localities in an endemic form. The cases that have come under my observation have been of a very severe type, out of the thirty treated six having proved fatal. This very high mortality was owing to the malignancy of the disease, and the very unsanitary condition of the dwellings in which it occurred. Four or five families west of the village of Newport, living within half-a-mile of each other in houses that were old, small and partially buried in the ground with earth filled up around the foundation, causing the wood to decay and remain in a wet condition. That such a dwelling would cause the disease, I am not prepared to say, but that it rendered the virus much more active and contagious and more difficult to manage in every way, I am sure of. The first case that occurred in this locality was a little boy six years of age who came home from the public school complaining of a sore throat and fever; from this case all the others followed in rapid succession. I have carefully endeavoured to trace the cause of the spread of this disease from this one, and have come to the conclusion that when diphtheria occurs in a locality favorable to the propagation of the virus that produced it, like this locality was, the air is quite sufficient to carry it from house to house. I have upon a former occasion urged the necessity of having the school houses in this township inspected regularly by the health inspector, and that he should be clothed with sufficient power to have at once corrected any unsanitary conditions, even to closing of the schools for a time. The old privy pit is the most common water closet in use in the country school yard, and often within a few yards of it is the well from which the children are allowed to drink. This certainly should not be allowed, when sanitary knowledge can so easily be obtained, and the public so able to carry it into effect. I have endeavored since my appointment as Health Officer of this township to teach the public how best to prevent disease, but it is strange how indifferent they are to those things that pertain so much to the welfare and well being of themselves and families; indeed, not until the grim monster seizes on some delicate member of a family and leaves it in sorrow to mourn the loss, which by more care and knowledge might have been saved. There is yet much to do in this line. The public must be compelled by legal measures to do their duty. Trustee boards must be instructed to consult the local board of health before they are allowed to select a site for their school house, or make any alteration in the ones they have, that may in any way interfere with the health of the innocent children so cruelly compelled to remain within its walls each schoolday. The laws of health should also be systematically taught in our schools, and legislative power given to trained men to enforce them, and show in every way possible that it is to the close observance of these sanitary measures that a country must look to attain to riches and physical and moral excellence; how to conform to nature's laws relating to man's existence, how to live to a good old age and pass away from natural decay, having suffered only a minimum of pain. Typhoid fever has been much less prevalent in this township than for the last few years. Nearly all the cases that have come under my observation were caused by contagion from patients in the city of Brantford nursing some relative in the city or taking a partially convalescent one to their home in the country, then innocently, perhaps, but from culpable ignorance, nursing the subtle poison in their own homes. This fever with our present knowledge of its cause and prevention can in all country places be reduced to a minimum, whenever the public are willing to be taught and obey the scientific knowledge that is offered to them. Scarlet fever has appeared in a most mild form in the township. About twelve cases were all that came under our notice, and these occurred during the months of July and August. The majority were taken ill while attending school, the families in which they occurred were separated by long distances and could not under the circumstances carry the disease from one to another. With care in isolating cases afflicted with this disease, much may be done to control it on its first appearance. I have been able myself to confine it to a single member of a large family when there was ample room in the house and my instructions faithfully carried out by the nurse. The only other contagious diseases which I will mention are measles and whooping cough. This will cover the list of

diseases which preventative measures employed in time will to a very large extent control. Measles have been prevalent in certain parts of the county, but not in this township. The cases under our observation have been easily controlled and managed. I may say the same of whooping cough. I would here call attention to the fact that during my observation for the last twenty years, these three diseases of childhood I have traced the origin of it to school houses and from these its spread to diffierent families, and sometimes over a whole country side, causing the death of many a promising child. The school room, I consider, above all other places, should be kept in the most sanitary condition, for in it we have every element favorable to the development and spread of disease : delicate children confined in large numbers in insufficiently ventilated rooms for six hours in the day is quite enough in itself to be the primary cause of disease, and will afford rich and well tilled soil for the minute germs that produces these diseases to propagate themselves and be conveyed to the homes of many an unsuspecting family. I might also mention the result of a few visits made by me in company with Mr. Charlton to a starch factory a short distance from the city. This was made in obedience to a complaint made by the Principal of the Indian Institution. We found the creek bed through which the refuse from the factory is washed into the river, was so lined with the albumenoid substance from the washing of the starch ; this exposed to the hot summer sun caused a most disagreeable smell, so bad indeed that it was impossible for any one to remain on the banks of the stream without feeling a degree of nausea and sickness. Mr. Charlton ordered the bed of the creek to be scraped, and disinfected with lime and sulphate of iron. etc. I recommended the Inspector to watch the premises and visit them every week till the water was again introduced into the canal which was used to flood the creek every day. In this way we were able to keep down all complaints, and I am not aware that any sickness was produced by it, and if the creek be kept full of water I think no further trouble need be feared ; should, however, the break in the dam take place again something different will have to be done by the company to control this nuisance. At the request of the local board of health of this township, I attended the American Public Health Association held this year in Toronto, in October last. At this meeting were present representatives from all the states in the union, California and Great Britain. The meeting lasted four days, during which time some of the ablest papers were read on preventative medicines that I ever had the privilege of listening to As the annual report of this meeting is to be published and a copy sent to me, which will be the property of this Local Board of Health, I will not attempt to give you even a synopsis of the work done by this able association. While in the city attending the meeting of the American Health Association, the health officers from the Province of Ontario were called together by the Secretary of the Provincial Board of Health, and formed themselvs into an Association, called the Association of Executive Health Officers of Ontario. This constitution was framed and adopted by the members present.

Thanking you, gentlemen, for your kind attention in listening to this incomplete report,

I remain, yours,

D. MARQUIS,
Medical Health Officer.

BRUCE.

Medical Health Officer's Report.

I have much pleasure in stating that my attention has not been called to the existence of any case of a zymotic character during the past year. Whooping cough of a very mild type appeared in a few instances. The sanitary condition of the municipality is in a very good condition.

CAMBRIDGE.

Secretary's Report.

With the exception of a few cases of diphtheria and whooping cough among the children, the people have enjoyed excellent health during the past year. The Board has taken effective measures for the sanitary laws of the Province being stringently enforced, and the results are more apparent this year than ever before.

CARADOC.

Secretary's Report.

The sanitary condition of slaughter houses and public and private places have been carefully looked after. There were five cases of scarlet fever, twelve of measles, fifteen of diphtheria, twelve of whooping cough, and five of typhoid. All the places were placarded and the usual precautions taken.

CAVAN.

Chairman's Report.

This Board acts on the good old principle that "an ounce of *prevention* is better than a pound of *cure*," and, therefore, every means known to us have been adopted for the prevention of the spread of disease, and the abatement or destruction, as the case might require, of every form of unsanitary condition. It is greatly to our efforts in this respect that is due the wonderful immunity from infectious disease we now enjoy; and we have reason to be thankful to the Almighty for crowning our efforts in the public weal with success.

CAYUGA, NORTH.

Secretary's Report.

An epidemic of diphtheria, of not a very malignant type, occurred in the township, and reached its severest stage in September. The school in the locality was closed, and all the standard precautions taken to prevent the disease spreading. There were only two deaths in all. I believe we are now entirely free from diphtheria. The sanitary condition of the municipality, with this exception, has been very good during the year, and is now excellent.

CAYUGA, SOUTH.

Secretary's Report.

The chairman thinks that it is useless for the Board to meet when there is nothing for them to do. It has therefore never met as a Board.

CHAPMAN.

Secretary's Report.

The sanitary condition of this township is very good. Diphtheria was present last March, but owing to the prompt measures adopted for its destruction, it did not spread.

The prompt removal of all refuse, etc., has resulted in good. The former prejudice against the Board is rapidly dying out, and now the people as a whole can see the benefits to be derived from a strict and careful administration of the health laws, and appreciate the efforts of the Board.

CHARLOTTENBURG.

Chairman's Report.

The Board, for the past two years, has been strongly endeavouring to educate the people in sanitary laws, and has devoted its attention to precautionary measures against the spread of contagious disease, and the abatement of all nuisances complained of. Some do and some do not appreciate the Public Health Act, and our endeavours to carry out its provisions. In time, however, education in this important work will have its reward. We have had only one or two instances of refractory parties against the notices of the Board, but this will not be tolerated. We have had only a few cases of whooping cough this year; no diphtheria since last year. The health and sanitary condition of our township is excellent, considering that the experience in the enforcement of laws relating to the public health is comparatively new.

CHARLOTTEVILLE.

Medical Health Officer's Report.

I have the honour of submitting the following report upon the sanitary condition of the township of Charlotteville :—

It is a matter for congratulation that a Local Board of Health has been established in this township to look after its sanitary interests.

The appointment of a sanitary inspector was a move in the right direction, as by his inspection the discovery of many nuisances in the village of Vittoria was accomplished. Although a good deal of illness has prevailed during the last few months, yet in nearly all the most severe cases the origin could be traced to impure water or pernicious water-closet arrangements, and as these are matters directly within the reach of municipal legislation, I would earnestly recommend the Local Board of Health to impress upon the township council the advisability of giving them their mature consideration.

Apart from the climatic condition of the season, which has been one favourable to the development of dysentery, typho-malarial fever and kindred diseases, there have been too many cases of fever to trace them merely to accidental causes, especially in the village of Vittoria. Two well-marked centres have existed for some time, and from these the disease has extended to a considerable distance, and in that direction, *i.e.*, to the leeward of the prevailing winds of this locality, whereas in the opposite direction no cases have appeared, yet the disease has not become at all general. I refer to the piggery and the ravine leading from the piggery, and the slaughter-house attached to one of the butcher-shops. Steps have been taken to check these sources of danger, which, I hope, will prove to be successful. These are the chief apparent causes of the disease alluded to above, yet others exist, which may prove to be the more serious causes of disease, and less easily remedied. I allude to the pernicious water-closet arrangements belonging to nearly all the dwellings in this municipality, and the neglected cleaning out of wells; and another source of disease in our midst is—the foundations of many of the houses are of wood, built close to the ground and banked up with earth during the late fall and winter, retaining dampness, and consequently causing decay of the timbers; as a result the health of the inhabitants suffers.

I would also beg to call your attention to the fact that a very small proportion of the children in this township have proper protection from small-pox—are not vaccinated, and trust the law on this matter will be enforced.

W. J. McINNES, M. D.

CLARKE.

Chairman's Report.

In March last the Board was duly formed, and the municipality was divided into sanitary districts, each member taking the one assigned him for his supervision. No disease or unsanitary condition arose during the whole year calling for the special efforts of the Board. All the members coincide in reporting the township to be in excellent sanitary condition.

CLINTON.

Secretary's Report.

Our Board of Health is in existence—not in very active existence. There have not been any contagious diseases for the past year reported. We have no medical health officer.

CROWLAND.

Secretary's Report.

In consequence of diphtheria, the schools in sections 2 and 3 have been closed. Several children died of the disease. The houses were placarded and isolation and other precautions ordered. The unsanitary condition of the slaughter-house is supposed to be the cause, and notices to the proprietor to have the law complied with received a promise of obedience. Removal to a safe distance was demanded and agreed to by the owner. Otherwise the township is in a good, healthy state.

DALHOUSIE.

Secretary's Report.

There have been thirty-seven cases of scarlet fever, resulting in the death of three children, and is not yet stamped out. The disease is isolated as soon as discovered. If systematic precautions were taken, however, a large percentage of these cases would not have occurred.

DARLINGTON.

Chairman's Report.

Nothing has occurred to require the special attention of the Board. No disease of an infectious nature. Township is in a sanitary condition.

DRAPER AND OAKLEY.

Secretary's Report.

The Board had the Medical Health Officer to vaccinate all the children in the public schools requiring it. The township is in a good sanitary condition. No zymotic diseases of any kind.

DRUMMOND.

Secretary's Report.

No disease of any kind has been reported to the Board, and no precautions taken to keep them out. No nuisances of any kind has been reported. The township is very healthy.

EASTHOPE, SOUTH.

Medical Health Officer's Report.

The township has had a complete immunity from infectious or contagious disease during the year. The health of the people and general sanitary condition of the township are excellent.

EDWARDSBURG.

Secretary's Report.

The Local Board did not take any action regarding the sanitary defects and needs of this township, nor have they complied with the requirements of the Public Health Act. There has been no serious disease, and this may be the reason of its inactivity. [This means that when disease arrives, an effort will be made to prevent its arrival! Ed. Reports.]

EGREMONT.

Secretary's Report.

The Medical Health Officer reports that there were three cases of diphtheria, supposed to be caused by impure water, and one case of typhoid, from same cause; one death from diphtheria. Only one complaint respecting a nuisance was received, and was at once removed. The township is in a good sanitary condition.

ELDERSLIE.

Secretary's Report.

Several cases of typhoid (one family), of which all recovered. Two cases of diphtheria were reported, and each of the houses in which it occurred was isolated, and the usual remedies taken to prevent its spread. No further cases. The scholars have been vaccinated, and the sanitary condition of the schools looked after. Our creamery is in a good condition.

ERAMOSA.

Medical Health Officer's Report.

We had an outbreak of diphtheria in the village of Rockwood of a severe form, in May and June, but by thoroughly isolating the places and the free use of disinfectants before and after convalesence, we had the satisfaction of confining the disease to the three houses in which it broke out. In other places there were also a few isolated cases of the

malady, as well as a few of scarlet fever of a mild type. A larger number than usual of typhoid cases occurred, attributed to the scant water supply. The necessity of getting rid of bad drainage, damp cellars, foul wells and privies, cannot be too strongly enforced on the minds of the people. The general good health of the municipality is satisfactory.

ESQUESING.

Secretary's Report.

The Medical Health Officer reports that no case of contagious disease has been in the municipality during the year, and that the township is in a good sanitary condition.

FLAMBORO', EAST.

Secretary's Report.

The only zymotic diseases that have occurred during the past year were a few cases of diphtheria and typhoid fever. It is gratifying to have to state that families generally are taking a far greater interest in sanitary matters and how to prevent disease than hitherto. The health of the people on the whole, has been very good.

FLAMBORO', WEST.

Chairman's Report.

The sanitary condition of the township, as reported by the inspector, is in a very good state, much better than last year, thanks to the willingness of the people to comply with the law. There are ten slaughter-houses in the municipality and all are kept clean. A large proportion of the children have been vaccinated in compliance with the Act in that behalf. There were three cases of diphtheria and three of typhoid fever. All precautions were taken to prevent spreading—isolation, disinfection, placarding, etc., which were thoroughly successful. These were all that occurred of an epidemic character, and I think we may congratulate ourselves that we escaped so well. Had the sanitary conditions not been so well looked after, it might have been serious.

GARAFRAXA, WEST.

Medical Health Officer's Report.

The general health has been good this year. Diphtheria was slightly epidemic last spring; I had eleven cases, one of which died. No other species of contagious disease. Extracts from the Health Acts have been printed and largely distributed.

GLAMORGAN.

Secretary's Report.

No infectious diseases whatever. The township is laid out into districts and taken charge of by the members of the Board, who carefully look after the sanitary needs of their respective routes, reporting to the Board as a whole, anything that requires attention. The township is, therefore, very well inspected, and the health of its people is very good.

GLOUCESTER.

Chairman's Report.

The slaughter-houses are kept in a clean and proper state. The schools, ten in number, are in a sanitary condition. We are thankful for the entire absence of infectious or contagious disease during the year, and the general health throughout the township is very good. We have had no complaints of unsanitary conditions. On inspections being made it was found that the citizens vie with each other in doing their utmost in keeping their houses and surroundings in a neat and clean state; and they are to be congratulated for entering into the spirit of the sanitary laws disseminated by the Board, and in co-operating cheerfully in their being carried out.

GREENOCK.

Secretary's Report.

The sanitary condition is good. No serious diseases visited us during the year.

GREY.

Secretary's Report.

The Board only met once during the year, there being no work for them to do. The usual notices were sent out to have everything in a sanitary condition before the summer months, and the orders were readily complied with. No contagious disease during the year. We have a Medical Health Officer, so that the Board is now prepared for any emergency.

GRIMSBY, NORTH.

Chairman's Report.

I have great pleasure in stating that the sanitary condition of this township is excellent. There has been only one case of disease of a contagious nature (diphtheria) during the year. The house in which this occurred was immediately placarded and isolated. So prompt were the measures of precaution against its spread taken, that it was strictly confined to its original limit. A nuisance was caused by a mill-pond, and the owner was notified to have it abated, which he cheerfully complied.

GRIMSBY, SOUTH.

Chairman's Report.

There has not been a single case of contagious or infectious disease during the year. We have only one village (Smithville) in the township, and to this may be partly attributed the congratulatory state of affairs. The provisions of the Health Act and of the Vaccination Act, have been carried out.

GUELPH.

Inspector's Report.

The only thing in the shape of nuisances calling for the Board's attention was the smells arising from dead, putrid animals—horses and dogs. These were attended to immediately after being notified of their existence. A few cases of diphtheria of a mild type were reported, which were isolated. Our township is in a good sanitary condition.

GWILLIMBURY, EAST.

Chairman's Report.

A nuisance was reported to this Board as being in existence in a certain house in the municipality. Typhoid had entered the family, and after one death had resulted, the Board took action and had the nuisance removed, disinfecting the premises, etc. Shortly after this, the premises of another person was reported to be unsafe, and it was ordered to be disinfected, but the agent of the owner thought it was safer than the first mentioned one and burned it! (A thoroughly effective, though expensive, way of getting rid of an unsanitary house). Several other nuisances were remedied. Diphtheria visited one family, several of whom had it, there being one death. The premises were disinfected after the recovery of the remainder of the family. The Board consider the present sanitary condition of the township in a satisfactory state.

HAGARTY.

Secretary's Report.

Diphtheria was brought to an hotel in the township by shantymen, who stopped there on their way north. Three of the children were infected, and two died. It did not spread any further. The township is in a good sanitary condition.

HAMILTON.

Chairman's Report.

I am happy in being able to state that the health of the township for the year has been very good, there not having been any disease of a serious nature. The sanitary condition of the township is improving year by year. The slaughter houses and cheese-factories, which were kept in such an unsanitary condition, have this year been kept in conformity with the law. Other unsanitary conditions have received the attention of the Board, and the people now know that the law must be enforced and obeyed.

HAWKESBURY, WEST.

Medical Health Officer's Report.

I have much pleasure in stating that the health of the township has been very good during the past year. There is no contagious disease at present prevalent, although we have had a few mild cases of diphtheria. There was whooping cough and diarrhœa amongst children, but very few deaths.

HIBBERT.

Secretary's Report

There have been a few cases of diphtheria and two of typhoid in the township, but no deaths, nor did they approach an epidemic form. The local committee of the Board visited all places likely to present an unsanitary condition, and while they found some not in a good state, yet on the whole a sanitary condition was found to prevail. Everything possible was done to abate nuisances. The township is now in a very healthy state.

HOUGHTON.

Secretary's Report.

The Board held only two meetings during the year. Nothing of an unsanitary nature arose in the township calling for the special intervention of the Board. A few nuisances of a minor character were complained of and remedied.

HOWARD.

Medical Health Officer's Report.

No infectious or contagious disease came under my notice during the year, and therefore I can report very favourably as to the general good health of the people. In his report the secretary of the Local Board says there were two cases of diphtheria, which were thoroughly isolated and prevented assuming serious proportions. The houses were well disinfected by fumigation, etc.

HULLETT.

Medical Health Officer's Report.

No serious diseases have prevailed here during the past year, with the exception of diphtheria, which continued in the west end of the township till March. It has been present since January last. A type of malarial fever has been in existence nearly all the year, but at the present time the people generally are in a healthy condition

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HUMBERSTONE.

Chairman's Report.

The members of the Board have evinced a fair amount of zeal during the year in the sanitary requirements of the municipality. Our health inspector has made several inspections of dwelling houses and privies, only a few of which required attention. Owing to the absence in our midst of contagious or infectious disease, and of conditions of a grave unsanitary aspect, our medical health officer and members of the Board have had no laborious duties to perform; they are watchful of the health interests of the township, and prepared to meet emergencies should they unfortunately come.

HURON.

Chairmans Report.

The only disease of a serious character we have had in the township this year was two cases of typhoid fever. Two inspections were made of the village of Ripley by the sanitary inspector, and he reports that the instructions given regarding vaults and privies were almost unanimously carried out. However, there were two cases of violation of the law which were brought before the magistrate, and fines were imposed in each case. The township is in a very healthy condition.

KALADAR, ETC.

Secretary's Report.

It was not necessary for our Board to meet even once. Since the smallpox epidemic there has not been any contagious disease of any account. The place is very healthy, and therefore the officers of the Board have very little to do.

KEPPEL.

Medical Health Officer's Report.

We had only two cases of diphtheria and one of typhoid. The usual precautions were taken regarding these cases. During the outbreak of smallpox in Wiarton village in the beginning of the year, the Board took the precaution of putting the Vaccination Act into force, and a very large number of the inhabitants were vaccinated. The vaccine used were from the Palmerston, Ontario, farm, and gave entire satisfaction. The duties of the Board, although light during the year, have been performed methodically and with a thorough appreciation of the work devolving on it.

KINCARDINE.

Secretary's Report.

I am happy to say that our township is in a good sanitary state, and free from disease of an infectious or contagious nature.

KINLOSS.

Secretary's Report.

No cause to take any precautions against an epidemic or endemic of contagious disease, as there has been none.

LORNE.

Secretary's Report.

There have not been any contagious diseases in the municipality during the year. The Board attended to any matter that came under its notice. The people are in excellent health, and the township is in a good sanitary condition.

MACAULEY

Secretary's Report.

A few cases of scarlet fever occurred during the year, but no precautions were taken by the Board to prevent the spread of the disease, which was therefore allowed to run its course. Children were allowed to attend school without presenting a certificate showing freedom from contagion. No nuisances exist in the municipality.

MAIDSTONE.

Medical Health Officer's Report.

There have been a few cases of diphtheria of a mild type—only four deaths: no other infectious or contagious disease. The small, general death-rate prevailing is due in a large measure to the good sanitary condition in which the township is kept, and the prompt measures adopted for stamping out any contagious disease that has appeared amongst us.

MALDEN.

Secretary's Report.

Diptheria has prevailed to an alarming extent, especially in September and October. One school was closed (Sec. 2) by order of the medical health officer, Dr. Park. There were some fifty-six cases in all, resulting in ten deaths. Dr. Park put in force every precautionary measure, and the disease is now apparently stamped out. No other contagious disease. The cause of diptheria here is not known. The Board will take measures to enlighten the people in regard to the duty of the public in relation to this as well as other contagious diseases. I am instructed to get 250 copies of pamphlet No. 15 for distribution.

MANVERS.

Chairman's Report.

Since we got rid of the smallpox epidemic at Pontypool, there have been no cases of serious sickness this year. The only nuisance complained of during the year was that of a piggery situated too near dwelling houses. The Board ordered the owners to have it removed at once.

MARIPOSA.

Medical Health Officer's Report.

There has been no severe epidemic of any kind. There have been a good many cases of whooping cough, and a few cases of diphtheria, both being of a mild type—no deaths. The sanitary inspector made two visits throughout the township, especially the villages thereof, and impressed on the minds of the people the necessity of carrying out the law in relation to sanitary reform. It is gratifying to note that the people are rapidly following into line in this direction; and that they evince a commendable desire of co-operating with the Local Board and its officers in their enforcement of the Public Health Act's provisions. Owing to the deceitful nature of all water supply, so far as appearance, taste and smell are concerned—the bad frequently being as sightly and pleasant to the taste as the good—it cannot be too forcibly impressed on all that it is absolutely necessary to have all wells cleaned out once a year, before the 1st of July. If this is done carefully and well, the chances of many diseases appearing amongst us will be considerably, nay, very materially, lessened.

MARYBORO.

Secretary's Report.

One fatal case of diphtheria this year, the only case coming to my knowledge. There were five cases of typhoid in a family near the flour mill, impure water being the supposed cause. The medical health officer ordered the water to be boiled before using, and there

have not been any further cases there. Recently we have had five cases of typhoid in the village of Moorefield, caused, it is supposed, by the effluvium from a slaughter-house near hand, but not now in use. There is another slaughter-house adjoining the village which, on inspection, was found to be in a filthy condition. The owner was notified to remove the nuisance, which he did forthwith. No further complaint from that quarter. The medical health officer has seen that vaccination has been pretty generally performed. I think I am safe in saying that this township never was in a better sanitary condition than it is at present.

MAYO AND CARLOW.

Secretary's Report.

The Board appointed by the council failed to organize, and of course there was little done. A new Board was appointed on November 8th, which is alive to the sanitary necessities of the municipality. Circulars have been issued by the Board giving directions to the people regarding disinfection, etc., etc., and the school teachers are instructed to carefully examine the children, and if sore throat, itch, or other signs make their appearance, to send them home and give notice to the Board. An epidemic of itch occurred in the municipality and the Board was successful in stamping it out.

MEDONTE.

Chairman's Report.

We have a health officer, but he is not a medical man. There have been only two cases of isolated typhoid in the township during the year—cause unknown. There was one complaint of a nuisance from a James Munro, but on investigation it was proved that there was no cause. Good health prevails among the people, which is a proof of the good sanitary condition of their surroundings.

MEDORA.

Secretary's Report.

No medical health officer. No disease of an infectious or contagious nature. The municipality is in a good condition.

MELANCTHON.

Secretary's Report.

In the beginning of the year several cases of diptheria and scarlet fever appeared, but owing to the way in which each case was thoroughly isolated they did not spread. The source of the disease cannot well be defined, but it is thought they were imported. The people now understand the danger of such, and when present they keep out of the way. The township is now in a good sanitary condition.

METCALFE.

Medical Health Officer's Report.

There has been an unusual freedom from contagious disease this year. An effort was made to comply with the provisions of the Health Act as far as was possible. The public schools are not in such a sanitary condition as the interests of public health require, but not being instructed to have this remedied I could do nothing.

MONA.

Secretary's Report..

There is a Local Board, but there being no unsanitary conditions dangerous to the public health, a Medical Health Officer or sanitary inspector has not been appointed.

MORNINGTON.

Secretary's Report.

The Board met this day. The doctors do not report infectious or contagious disease, although forms have been supplied them for that purpose. There have been cases, but the Board did not receive any notice, so that they cannot be described.

MORRISON.

Chairman's Report.

A Board has been formed but no Medical Health Officer or sanitary inspector appointed, neither being needed. The several members of the Board individually looked after the sanitary interests of the township, and all agree that it is in a good condition. The people—they are not numerous yet—appreciate the public health law.

MCDOUGALL.

Chairman's Report.

Notices were sent out early in the spring to have backyards and privies of dwellings put in order, and to the owners of the four slaughter-houses to put their premises in sanitary condition. The ispector found, on examination, that a good many had not complied, and he notified the delinquents to have the matter attended to at once. Some obeyed, and others did not. With the exception of two cases of diptheria, we have had no contagious or infectious disease. The township is in a healthy condition.

MCNAB.

Secretary's Report.

We had several cases of smallpox in the beginning of the year—two of them proving fatal. Infection came from Horton township. The physicians did not report the cases till they were all over, and the Board, although hearing suspicious rumours, could not act as they did not know whether it was smallpox or not—indeed, one of the doctors said it was not small-pox. Had the Board known early enough, the disease could have been confined to the first case. There were two or three cases of diphtheria in the rear of the township, but the doctors, in this case also, failed to report—none were fatal. No nuisances of any kind were found or complained of during the year.

NICHOL.

Secretary's Report.

No contagious diseases nor unsanitary conditions. Careful inspections have been made, and instructions given the people, which were attended to.

NISSOURI, EAST.

Secretary's Report.

The only matters engaging the attention of the Board for the past year were a couple of nuisance cases which have been disposed of satisfactorily, as no further complaints have been made. The health of the municipality is good—no cases of infectious or contagious disease.

NISSOURI, WEST.

Secretary's Report.

Many nuisances have been abated which, if left alone, might have proved dangerous to the public health. The Board and sanitary inspector have been diligent in having sanitary matters enforced in the township. No serious disease of any kind. The people are rapidly becoming alive to the necessity of Local Boards, and appreciate the action of the authorities in their endeavour to lessen disease by destroying its causes.

NORMANBY.

Secretary's Report.

On the 19th of June the Board met to receive the first report of the sanitary inspector. His reports on this and other occasions throughout the year, state that he met with a generous co-operation on the part of the people in improving the sanitary condition of the township, and says that this condition is excellent. No contagious or infectious disease.

ONEIDA.

Medical Health Officer's Report.

I have met in my practice with a large number of diphtheria and typhoid cases, the causes of which I failed to trace. The village of Hagersville has been free from all epidemic diseases, and a great improvement has taken place in the sanitary surroundings of the inhabitants. A great deal, however, has yet to be done in this direction. I would strongly advocate the introduction of the dry-earth system of the disposal of excreta. The present system of pits is bad, and has most unquestionably resulted in much sickness and death by the sewage from them filtering into the water of the wells convenient to them; and everyone can see that in a large number of cases this proximity of pits and wells in our municipality, is too real to be mistaken even by the most ignorant. I am pleased to state that the public school, during a late visit, showed very agreeable evidences of its good sanitary condition.

ORILLIA, ETC.

Medical Health Officer's Report.

I have pleasure in reporting an almost entire absence of prevalent diseases in the township, there being only a few isolated cases of fever. I would call your attention to the unsanitary condition of Washago village, there being always more sickness in it than

in any other part of the municipality. The drainage is bad, and there is a great want of care and cleanliness on the part of the inhabitants so far as their surroundings are concerned. This matter should be at once looked into, and a careful inspection, under the direction of the Health Officer, made so that your Board may know exactly what is wanted to be done. My opinion is, however, that there must be a material alteration made between the relative position of the municipal council and the Board, before any material progress in sanitary matters can be accomplished.

ORO.

Secretary's Report.

The Board of Health is not very active here. There have been quite a number of cases of diphtheria, caused it is supposed by drinking water polluted by underground soakage from privies—twenty-four cases—and if proper precaution had been taken a large percentage of them at least might have been prevented. The general health with this exception has been good.

OXFORD, NORTH.

Medical Health Officer's Report.

We have suffered from a severe epidemic of diphtheria, which began early in the spring and was very general, not only in this township, but throughout the entire county; seventy-six cases came under my notice. The disease again broke out in October, and is still in existence; twenty-six cases have come under my notice. All the cases were of a mild type and very few deaths resulted. Whooping cough has been epidemic also, a large number of children having been affected. A few cases of typhoid and scarlet fever, mumps and measles have come under my care for the year, but not nearly so many as in former years. Inspections have been made by the sanitary inspector, and where any unsanitary condition was found to exist it was removed. [Nothing is here said as to the causes of the existence of diphtheria and other diseases. We cannot help thinking that if a thorough search had been made, some underlying causation would have been ascertained. What about the water? Has there been a polution of it by the infiltration of the contents of privy vaults from their dangerous proxomity to the wells? etc., etc. Ed. Reports].

PEMBROKE.

Chairman's Report.

The only contagious or infectious disease amongst us this year was diphtheria, of which we had two cases. The action taken by the Board to prevent it spreading was highly successful. Any unsanitary conditions coming under the notice of the Board was attended to.

PITTSBURG.

Chairman's Report.

When nuisances were reported or known of they were attended to. Each member of the Board took a district to himself and carefully inspected it, attending to anything of an unsanitary nature. The township is in a very healthy condition.

Plantagenet, North.

Chairman's Report.

We have a medical health officer and sanitary inspector who have recieved instructions to look after the sanitary requirements of the municipality, and it is hoped their action will have the effect of considerably lessening the number of infectious diseases. We had a large number of cases of diphtheria—fifty-two cases and eleven deaths—and eight cases of typhoid and two deaths, while measles was present to a considerable extent, with a large number of itch cases.

Plantagenet, South.

Secretary's Report.

In March last a case of smallpox occurred, and the Board took immediate action to confine the disease to the house in which it was, which was successful. There have been cases of diphtheria throughout the township, but as they were not reported by the physicians in attendance the Board took no action! The sanitary condition of the township is fair and the health of the people good. [So that the Board was cognisant of the presence of diphtheria or any other epidemic disease in its district, it was its bounden duty to investigate and take steps for the destruction of the disease and the prevention of its spread. Local Boards should do their duty without being solicited to do so, the Public Health Acts have already done the "soliciting" and they, and they only, should be obeyed. Ed. Reports.]

Plympton.

Secretary's Report.

No epidemic of any kind of disease. The township is in a very healthy condition.

Proton.

Chairman's Report.

A few cases of scarlet fever broke out amongst the children in the village of Dundalk—three deaths. The schools were closed for two weeks and the usual precautionary remedies taken to keep the disease from spreading. The citizens generally were personally notified by members of the Board on their rounds of inspection to have their premises put and kept in a sanitary condition. This was attended to. I am happy to say that the township is in a good healthy state.

Puslinch.

Inspector's Report.

We have had six cases of diphtheria and one or two each of scarlet fever and typhoid; one died from diphtheria, the other five being reported by the physician out of danger. Isolation, placarding and disinfection confined the disease to the one house. The school

was also closed as a precautionary measure. All complaints, and they were many, real and imaginary, of any unsanitary nature were promptly attended to and satisfactorilly disposed of. Some of the slaughter-houses are in an unsanitary estate; indeed some are so old and saturated so badly with deleterious matter that it would be hard to keep them clean. There should be no such industries in villages, they should be removed to safe distances, and piggeries also. I found the sanitary surroundings of schools in a very good condition, all but one well which wanted cleaning badly, and this was attended to by the trustees. I have pleasure in stating that at the present time the township is in a good sanitary condition.

Rainham.

Secretary's Report.

Six cases of diphtheria occurred all in one family. Isolation, disinfection, etc., were adopted and the disease did not spread. Sanitary condition excellent.

Raleigh.

Chairman's Report.

The Board has directed its attention principally to the removal of nuisances and the enforcement of laws respecting vaccination. The stagnant water nuisance in the village of Fletcher has been removed, and as a consequence there is a marked falling off in malarial cases of disease. Active measures have been taken in the matter of vaccination, 500 vaccine points having been purchased from the Provincial Board, and all the school children requiring to have the operation performed were vaccinated. As remarked in a former report, our water supply is entirely surface water, and is liable to polution from various causes The Medical Health Officer has had his attention drawn to this matter, and the Board has no doubt but that a large proportion of the endemic disease of the township is due to this cause. The secretary sent circulars to every medical practitioner in the municipality, asking them to send their reports of infectious or contagious disease to the Board, but with the exception of the Medical Health Officer not a single report has been received. When gentlemen fully cognisant of the evil consequences of disobedience to the law calling upon them to perform this duty in behalf of sanitation, how can they or any one expect that pupils in sanitary science, represented by the majority of the people of this township, will obey laws ignored by those who should be, but are not, their teachers? In consequence of the extensive drainage which has been in operation for several years past, the township is now free from swamps or wet land.

Richmond.

Secretary's Report.

In February last, the sanitary inspector was instructed to notify the owners of all premises, to have them cleaned up and disinfected, which was duly observed. In November diphtheria broke out in a house and six of its members were stricken with the disease, resulting in three deaths. The Board took active and successful measures to prevent the disease spreading from the one house.

ROCHESTER.

Medical Health Officer's Report.

During the year we have had two slight outbreaks of diphtheria, producing a very small mortality, there being forty-three cases and only four deaths. There is great room for improvement in our water supply. The wells should be carefully guarded against the possibility of any sewage whatever entering them. The extensive drainage carried on latterly has been of great benefit to the public health. The water of the public schools wants looking after. On the whole people are healthy and the township in a clean condition.

ROSS.

Secretary's Report.

The Board gave notice to the school trustees to have the children of the schools regularly inspected, so that the first symptom of infectious disease could at once be discovered and remedies adopted to prevent its spread. Several cases of diphtheria and scarlet fever occurred and precautions taken regarding isolation, etc. Several complaints *re* unsanitary conditions received the attention of the Board and were remedied. The Medical Health Officer now reports the township in a good sanitary condition.

RYDE.

Secretary's Report.

Although the members of the Board have been constantly on the alert, they have not found anything of an unsanitary character in the township calling for their interference.

RYERSON.

Secretary's Report.

Nothing of importance to report. No disease whatever during the year. The Board is ready when occasion demands it to comply with the Public Health Act.

SARAWAK.

Chairman's Report.

The owner of a slaughter house was convicted twice for keeping his premises in an unsanitary condition. After the second conviction he thought it better to obey the law and did so. The Board recommend the general vaccination of the people requiring the operation performed next year. The trustees will be requested to admit no child recovering from an infectious disease without a medical certificate. The schools have been inspected and are in a fairly good sanitary condition. The outbuildings might be improved however. Instructions were given to this effect, and it is expected the trustees will have matters put right.

SAUGEEN.

Medical Health Officer's Report.

There has not been any contagious or infectious disease in the township for the past year, and a remarkable absence even of endemic disorders; so much so that I am happy in being able to pronounce the health of the township excellent. The people are to be congratulated for the manner in which they have obeyed the sanitary regulations of the Board in keeping their premises in a clean and healthy state.

SAULT STE. MARIE.

Secretary's Report.

In the latter end of last year and the early months of this we had a severe epidemic of diphtheria in the township convenient to the town, in which fortunately there was not a single case. Two families living in separate townships lost four children respectively. The remarkable freedom from disease of infectious or contagious nature which our town has enjoyed, is in a great measure owing to the great vigilance of our sanitary inspector, who insists that the law be obeyed in dealing with all matters requiring its enforcement.

SCOTT.

Medical Health Officer's Report.

It is a matter for congratulation that the sanitary condition of this township has been during the year in such excellent shape as to render a lengthy report from me unnecessary. In diseases of an infectious nature we have had only a few cases of whooping cough, no diphtheria, scarlet fever or typhoid. It is known that children have attended school before they were entirely free from whooping cough. This is a pernicious habit and one that is fraught with much danger. A certificate of a medical man should be demanded by the teacher from all children who have had any species of infectious ailment before granting them re-admission, and children of the same family as those infected should not be admitted to school unless they present a certificate showing that the incubatory stage of the disease has been passed.

SENECA.

Medical Health Officer's Report.

In my various tours through the township I have found that the most of the instructions of the Local Board have been carried out, and the greater part of the township is fairly healthy and in a clean condition. On the part of some, however, there is a want of appreciation of the benefits to be derived from cleanliness, but each year's experience shows a decided advancement in sanitary affairs, and the people are rapidly becoming in accord with the law. The general health has been very good; no epidemic has been noticed, and there have only been a few cases of diphtheria.

SHERBROOKE.

Secretary's Report.

The sanitary condition during the year has been good; no contagious diseases; general good health prevails.

SOUTHWOLD.

Secretary's Report.

The cheese factories and dairies have been kept in a first-class condition, and the slaughter-houses have been greatly improved and are now in good sanitary order. No contagious disease, showing conclusively that sanitary laws are receiving attention.

STAMFORD.

Secretary's Report.

There have been six cases of scarlet fever of a mild type—all recovered. Although improvements in our sanitary condition can be made, and such will be made as the knowledge of sanitary matters advances, yet our township will compare very favourably with any other in the county in that respect. Physicians have been notified that they must report all disease of an infectious or contagious nature under their care to this Board. The Board is doing its best to have the Health Act enforced.

STANHOPE, ETC.

Secretary's Report.

The Board has no report to make, as our division is very healthy. There were two cases of Diphtheria and every precaution taken, such as isolation, etc., to prevent its spreading. There were no deaths.

STISTED.

Secretary's Report.

The Board met and reported that the township is quite free from contagious or infectious disease and in a very good sanitary condition.

SYDENHAM.

Medical Health Officer's Report.

For any other part of the township only my own can I say anything relating to infectious or contagious disease, as I had none reported to me by the resident physicians. There have been several cases of diphtheria in my district, which can easily be traced to an epidemic of that disease in the southern part of the township. Some of these cases were very severe, but under proper treatment they all recovered. After this we had a case of smallpox in the person of a young man who was on board the S.S. *Athabasca* and who came to Leith. The house was isolated and all precautions taken against the disease spreading, they were successful. An hospital was erected and in the event of the disease coming back again we will be in a better position for the isolation of it. Then scarlet fever made its appearance six miles from Annan; the house was immediately isolated, but the child died; another took it and recovered, and the disease spread no further. It came from outside the township. Measles appeared in a family, but did not spread beyond it. At the present time I know of no infectious disease in the township. Vaccination to a large extent has been carried on, especially among the school children, and on the whole the township is in a good sanitary condition.

ST. VINCENT.

Secretary's Report.

The only case to which the attention of the Board was called during the year was a nuisance arising from the bad condition of the privies on the school grounds of S. S. 14. The attention of the trustees was called to the matter and they had the nuisance removed. The sanitary condition of the township and the health of the people is good.

THOROLD.

Inspector's Report.

The four slaughter houses in the township are in a good sanitary condition. The only nuisance complained of is a pool of stagnant water in the village of Allanburg, belonging to James Upper. This pool is of considerable area and dries up in the summer, but in the spring becomes again filled and stinking. The Board will have to take the necessary steps to have this unsightly nuisance removed.

THURLOW.

Medical Health Officer's Report.

A few cases of scarlet fever, diptheria and whooping cough occurred during the year four deaths being reported. A cheese factory complained of was visited and found to be in an unsanitary condition, and the owners notified to put matters right, which have been done.

TILBURY, EAST.

Secretary's Report.

Owing to the fear of smallpox coming from Detroit, where it was early in the year, our Board took advantage of the scare and had a large number of the inhabitants vaccinated. Early in the summer an outbreak of diphtheria occurred and gradually increased in virulence till November and then suddenly almost disappeared. Every precaution was taken to arrest its spread, and to these precautions may be attributed its sudden flight from our midst. The outbreak is alleged to have had its origin in the wells becoming tainted, owing to the extreme dryness of the summer lowering the water in the wells, in some cases almost to complete dryness. There were a few cases of typhoid and scarlet fever, but they did not spread to any great extent. Otherwise the health of the people has been good. Great improvement has been made in the sanitary condition within the past few years.

TILBURY, WEST.

Secretary's Report.

Diptheria has been the most prevalent contagious disease we have had during the year. There were also a few cases of typhoid. The cause of these diseases is attributed to privies in many instances being too close to wells.

TORONTO.

Secretary's Report.

We have had a few cases of diphtheria in families who were cognizant of the precautions necessary to be taken under such circumstances, and they adopted isolation and the usual disinfectant and fumigation process. Fortunately they were able to defray all expenses themselves. This was all the kind of contagious disease we have had in our midst this year. The Board caused the school trustees to change the site of the proposed new school house, from a marsh to a more healthy locality.

TUCKERSMITH.

Secretary's Report.

No contagious diseases have made their appearance, and the municipality is in a good sanitary condition.

TURNBURY.

Chairman's Report.

I am happy in being able to report that our township is in a first-rate sanitary condition. The Board appointed Dr. Bethune Medical Health Officer, in August last, and gave him instructions to have the laws relating to compulsory vaccination enforced. He promised to visit the schools and other places for that purpose, but up to the present I am sorry to say that he has not made these promised visits: and vaccination and the laws in relation thereto remain in *statu quo*.

USBORNE.

Medical Health Officer's Report.

Diptheria which has been so prevelent in years past in our township, entered only into two families—two cases—this year. First case was in February, and recovered; the last case was in October, and proved fatal, the patient succumbing to paralysis of the heart. In each case isolation and thorough disinfection resulted in a complete mastery of the disease, destroying the chance of its spread. We had only three cases of typhoid this year, the first being imported from vicinity of Owen Sound, from where he removed to Usborne, where he died. The physician attending informed me of the particulars. The widow of the first patient was ill with the disease in a mild form, which she communicated to the child of the people she was stopping with. The precautions taken were similar to those adopted in the diphtheria cases and resulted in confining typhoid to the one house. We had a few cases of dysentery, some being very severe. While I have great satisfaction in calling attention to the comparatively small amount of disease of an infectious or contagious nature with which we have been visited, and to the general excellent health of the community, I must tell you that a great deal has yet to be done by the Board in the direction of unsanitary conditions throughout the township. The schools, for instance, want looking after, the privies attached to them, the drainage of their grounds and the hygienic properties of their internal construction. The health of the children depends on these matters being thoroughly attended to from year to year. The wells, drainage and privies of many private dwellings are not in a sanitary condition, and it is a wonder the general health is so good. In order to comply with the law the Board must act—its power is undoubted—and have every unsanitary condition in the township destroyed. Thorough, judicious inspection will show what is required, and that much remains to be done ere we approach a state of anything like sanitary perfection.

VESPRA.

Secretary's Report.

No contagious or infectious disease of any kind in the township for the past year. The sanitary inspector has had all unsanitary conditions remedied, so that the municipality is in a good healthy state.

WAINFLEET.

Medical Health Officer's Report.

The Board has had very little to do in remedying unsanitary conditions, for the reason that our township during the year has been almost free from such I would advise, however, that a sanitary inspector be appointed and a special inspection made of the privies in connection with schools and dwelling houses, and their comparative distances from drinking water. I think good would result from this course.

WATERLOO.

Secretary's Report.

The Board had a large number of bills containing important provisions of The Health Act distributed amongst the people, and the instructions were invariably carried out by them; they are becoming rapidly educated and interested in sanitary matters. No malignant type of disease has visited us during the year, with the exception of two cases of diphtheritic croup, one of which proved fatal. I am very happy in being able to state that the general health and sanitary conditions are good, and this may, in a great measure, be attributed to the people themselves, who, on all occasions, evince a desire to second the Board in its duties to the public.

WATT.

Secretary's Report.

The sanitary condition of the township is in a very good condition, and the general health of the people excellent. No contagious or infectious disease has occurred during the year.

WAWANOSH.

Medical Health Officer's Report.

We had a mild epidemic of diphtheria—twenty cases, two deaths. With the exception of this and about twenty-seven cases of dysentery, the township has been in an excellent healthy condition during the year. No nuisances have been seen or reported, and there are no sources of malaria in our midst.

WELLESLEY.

Medical Health Officer's Report.

With the exception of a few cases of typhoid fever, which terminated favorably, there has been no disease present calling for any special action. The Board would recommend that in view of the fact that so many villages exist in this township, a lax administration of the Health Act and other unfavorable circumstances, said villages might become the breeding grounds for contagious and infectious diseases. The law bearing on the disposal of refuse, offal and excrementitious matter should be enforced in the villages of Bamburg, Crosshill, Hawksville, Heidelberg, Linwood, St. Clements and Wellesley.

WESTMINSTER.

Chairman's Report.

Our township has been very healthy during the past year, there having been no infectious or contagious disease present, except a few cases of typhoid fever, which were isolated and prevented from spreading. Only a few complaints of nuisances of a mild kind have been made, and these received proper attention from the Board.

WHITBY EAST.

Secretary's Report.

There have been a few cases of diphtheria and typhoid, but they did not spread to any serious extent. Complaints have been made of the unsanitary condition of places where pigs and cattle were kept as being nuisances. The board dealt with these in a satisfactory manner; and for the people it must be said that they, in every case where the Board is called upon to act, evince a thorough appreciation of its interference in the prevention of unsanitary abuses. So far as is known, the township is free from contagious or infectious diseases at the present time.

WHITECHURCH.

Secretary's Report.

There has not been a case of contagious disease reported during the year, although I have reason to believe that there have been isolated cases of diphtheria and measles in the township. One case was investigated by the medical health officer and two other doctors, and they arrived at the conclusion that the disease was caused by the general unsanitary condition of the premises in which the disease was. The Board remedied this at considerable expense.

WILLIAMSBURG.

Secretary's Report.

The Board investigated complaints against two slaughter-houses in different parts of the township. Both were found to be nuisances under the law, and the proprietors were ordered to put them in a sanitary condition; no complaints since. Cheese factories are in a fair sanitary condition; no hog pens are allowed to be in connection with them, the whey being returned to the patrons. Diphtheria is said to prevail in one section of the township, but the rumour has not been authenticated by any report from a medical man.

WILLOUGHBY.

Secretary's Report.

The board exercises a general supervision over sanitary matters in the township, but in the absence of any infectious disease the duties of its members have been very light.

WOOLWICH.

Medical Health Officer's Report.

Early in the spring a general inspection was ordered, and public notices posted in all public places. I personally made almost a house to house inspection of seven villages. Their sanitary condition, although not perfect, was found to be greatly improved since last year, all the surroundings, piggeries, etc., etc., being in far better shape, the styes being removed to the required distance from dwellings. The water is good, and although the

wells are not often cleaned, still the absence of typhoid and diphtheria seems to prove the good quality of the water. There have been a few cases of diphtheria, but none fatal; and the same way with typhoid and scarlet fever—all were mild. The township is in a good sanitary condition.

YONGE, FRONT OF.

Secretary's Report.

There has not been any epidemic disease in the township during the past year. The sanitary condition of the township is very good. The cheese factories have been inspected and suggestions of improvement made to their owners. Owing to the smallness of the township and its immunity from serious disease, there was not a medical health officer appointed.

ZONE.

Secretary's Report.

I have great pleasure in stating that, with the exception of three serious cases of typhoid, we have been blessed with an entire freedom from infectious or contagious disease. Owing to the prompt execution of precautionary measures for isolation, disinfection, etc., etc., in these typhoid cases, we had the satisfaction of soon stamping them out. No deaths. The schools in the various sections were inspected, and where it was found that unsanitary conditions existed, the trustees were notified to have them remedied without delay. Sanitary matters are progressing satisfactorily in our township.

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